MUZAFFARPUR INSTITUTE OF TECHNOLOGY, MUZAFFARPUR

Muzaffarpur Bihar-842003 (Est. 1954)

(Under the Department of Science & Technology, Bihar)

Minutes of Meeting of 12th BOG meeting under TEQIP-III

Date- 24.08.2020, Time- 12:15 PM

Venue- Video Conferencing

12th meeting of the BOG of MIT, Muzaffarpur under **TEQIP-III**, was held on 24th august 2020 at 12:15 PM. Under the chairmanship of BOG, Chairman, Sh.Yogendra Prasad, (Ex-CMD, NHPC).

The Following members were present:

1.	Shri Yogendra Prasad Ex- CMD, NHPC	Chairman, BOG
2.	Sri Sanjiv Kumar, (IAS), Director, DST , Govt of Bihar	Member
3.	Prof. P. K. Jain Director, NIT, Patna	Member
4.	Dr. Manoj Kumar Tiwari RO, AICTE	Member
5.	Sh. Bishwajeet Choubey, Chief Engineer, DRDO, New Delhi	Member
6.	Dr. Rajeev Kumar Registrar, AKU Patna	Member
7.	Sh. Bhanu Pratap Singh SPA, SPIU, Bihar	Special Invitee
8.	Dr. Bushra Zaman Nodal officer(academic), SPIU, Bihar	Special Invitee
9.	Prof. P. D. Porey Ex-Director, NIT, Surat cum mentor	Special Invitee
10.	Dr. M. P. Singh TEQIP-III Coordinator, NIT Patna	Special Invitee
11.	Dr. S.K. Jha Head Applied Science, MIT Muzaffarpur	Member
12.	Dr. Vikas Kumar Head, Mech. Engg. Deptt., MIT Muzaffarpur	Member
13.	Dr. Y.N.Sharma Head, Elec. Engg. Deptt., MIT Muzaffarpur	Special Invitee
14.	Shri Ashish Kumar Assistant Professor, Civil Engg., MIT Muzaffarpur	TEQIP-III Co-ordinator
15.	Prof.(Dr.) J.N.Jha, Principal, MIT Muzaffarpur	Member Secretary

The Chairman extended the warm welcome and thanked each member for sparing their valuable time to attend the meeting. After welcome the agenda items were discussed and following decisions were taken.

01/12 Action Taken Report of 11th BOG meeting

Item No.	Agenda Item	Action Taken
03/11	Status of Procurement- Department wise	Approved
04/11	Approval of Action Plan for April. to June 2020	Approved
05/11	Progress in NBA Accreditation	Noted
06/11	Status of Employability Skill Training	Noted
07/11	Status of GATE Training	Noted
08/11	Financial Statement Head wise	Noted
09/11	Activities undertaken/participated or proposed by faculties and students during July.-Sep, 2020	Noted
10/11	Any other Item	Noted & Approved

Submitted for information, discussion and approval.

Resolution:-The matter was discussed and the committee approved the Action Taken Report.

02/12 Proposed Activities under Twinning arrangement

NPIU has suggested 14 activities under twinning arrangement. The details as follows.

S. No.	Twinning Head	Proposed activities till Semester End	Present Status
1.	The action plan for twinning activities implemented in last year and & current year planned (Y/N)	As suggested by Principal Secretary if any event/activity is taking place it should have some clear outcome.	Notified to all concern that all activities to be conducted should have clear measurable outcome.

2.	No. of courses/ classes/ workshops conducted by the faculty of NIT-P for students of MIT-M for training and academic development and vice versa.	More expert lectures can be conducted by NIT Patna Faculties in ECE, ME, CE, IT, LT & EE for 1st, 2nd & 3rd Year students of MIT, Muzaffarpur.	1. Two groups from each department from B. Tech are doing major project at NIT Patna. 2. Five Days Workshop on "Hands on Practice on MATLab" **(From 3rd to 7th February 2020)** was organized for 3rd yearstudents of Electrical Engg. Deptt. **Remark: Activities are affected due to lockdown**
3.	No. of courses delivered by 1.3 institution for students of 1.1 institutions (Min 1 per program per year). (10% syllabus covered)	Expert lecture for 2nd & 3rd Year B.Tech students and 2nd Semester M.Tech students will be conducted by faculties of NIT Patna.	Notice was circulated by Coordinator TEQIP-lll to all concern HODs (UG and PG courses) to send the Subject and related topics of 2nd and 3rd year students to be covered under expert lecture. **Remark: Activities are affected due to lockdown.**
4.	No. of trainings conducted for faculty/ supporting staff of MIT - Muzaffarpur by NIT-P for training and academic development and vice versa	All faculty members and technicians will be visiting lab of NIT Patna	Online FDP on "Recent advancement in Power Electronics Applications with MATLAB Simulation" from **25th-30th May 2020 organized by NIT Patna.** Notice has been circulated by Coordinator TEQIP-lll to all concern HODs (UG and PG courses) that faculty members and technicians should visit the NIT patna Labs in **March 2020** on mutually agreed date form their counterpart of NIT-Patna. **Remark: Activities are affected due to lockdown.**

5.	No. of seminars and conferences conducted by NIT-P for students of MITM to share research and discuss technological advancements in dynamic industrial and business environment	Electrical Engg. Deptt. of NIT Patna and MIT Muzaffarpur has conducted an International Conference on ICEFEET 2020 in collaboration with Electrical Engg. Deptt. of MIT Muzaffarpur.	As per decision in 9th BOG meeting r for an assistance of Rs.2,00,000/- in schedule conference of NIT Patna. MIT Muzaffarpur has paid the bills of Rs 1,99,055/- as raised by NIT Patna.
6.	% of faculty perusing collaborative research (10 %)	More faculties are being encouraged to do their research work	1. Out of l0 CRS projects awarded, 03 Co-PI's for CRS project are from NIT Patna.
		in collaboration with NIT Patna.	2. 23 faculties are doing Ph.D from NIT Patna
7.	No. of departmental partnership for joint research activities for applied research and technological development	1) While filing Patent interaction with concerned faculty of NITP should be made. 1) 2) A workshop on Patent awareness is being planned under twinning arrangement	a) 23 faculties are doing Ph.D lrom NITPatna. b) Out of l0 CRS projects awarded, 03 Co-PI's for CRS project are from NIT Patna c) A workshop on Patent awareness was planned under Twinning arrangement nut could not materialize due to lockdown..
8.	Number of Industry Partnership for Joint R & D and internships	A request has been sent to NITP to attach the name of MITM in already existing and future Industrial association. Looking forward for such association.	Student are suggested and advised to join internship program with 1.1 internship in summer or for any project work.

9.	Career Planning Sessions by 1.3 institution for 1.1 institution (2 Sessions)	Each department of MIT Muzaffarpur are planning to organize a Career Planning session with NIT Patna.	**Activities affected due to lockdown.**
10.	Number of seminars and learning forums conducted by NITP for MITM on Governance practices, institutional management, academic and non-academic reforms	Library audit is being planned by 29th February 2020.	A letter has been issued by Coordinator. TEQIP-III to Prof. In-charge Library to conduct library audit by 25th April 2020. **Remark: Activities are affected due to lockdown.**
11.	Number of faculty of MITM inducted on various bodies (BoG, BoS, Senate, etc.) of NITP for learning of good governance practices and vice versa.	In 06th BoG meet of MITM on 11th March 2019 it was decided that at least one faculty member of MIT Muzaffarpur will be invited to participate in the Board of studies of all departments/ courses.	Faculty from Mechanical Engg. has deptt. attended BoS on 18th Dec 2019
12.	Assistance provided in short term advisory and consultancy services by NITP to MITM	The process for consultancy services and its documentation is in progress. It is proposed to have assistance from NIT Patna in documentation as soon as possible.	NIT Patna alreadyshared the consultancy norms.\
13.	Workshop conducted on Outcome Based Education (NBA) by NITP for MITM	Review of NBA Accreditation preparation is being planned by team from NIT Patna	SAR for all six courses uploaded.
14.	Assistance given by		

	NITP to MITM in filling-up of SAR for getting accreditation	Mock exercise will be being planned before NBA team visit.	SAR for all six courses uploaded.

Submitted for information, discussion and approval.

Resolution:- The matter was discussed and approved. Board directed for participation in activities being done by the mentor institute.

03/12 Status of Procurement- Department wise

NPIU has declared, the institute as one of high performing institute. Again for the same additional 10 % allocation has been made on revised PLA . The additional award stands to Rupees 1.1 Crores and total PLA reached to Rupees 12.1 Crore. Please be noted institute has been previously awarded for additional allocation of 10 % due to high performing institution category. The detailed is attached in table below and letter from NPIU is attached vide Annexure 3.1

Sl No ;	Description	PLA	Procurement	Academic	IOC
1	Project Life Allocation committed for TEQIP-III	100,000,000	60,000,000	30,000,000	10,000,000
2	Additional 10 % allocation made for high performing institution on PLA on 27th August 2019.	10,000,000	6,000,000	3,000,000	1,000,000
3	Second time additional 10 % allocation has been made for performance on 31st July 2020	11,000,000	6,600,000	3,300,000	1,100,000
	Total	**121,000,000**	**72,600,000**	**36,300,000**	**12,100,000**

With this additional fund over the revised PLA, Now the procurement component is Rs 7.26 Cr. Earlier the college completed the procurement activities of 6.60 Cr. For additional amount of 66,00,000/- the new packages has been proposed for approval :

	Package	Amount	Remarks
Total Amount for Procurement as per revised PLA	74	72,600,000	
Procurement already Completed	69	6 ,60, 00,000	Details attached vide Annexure- 3.2.
Packages placed for approval	8	**69 , 36,500**	Details attached vide Annexure- 3.2.

Submitted for information, discussion and approval.

Resolution:- The matter was discussed and approved.

04/12 Approval of Action Plan for Oct. 2020 to Dec. 2020

The college has been awarded additional fund in August 2020. In view of this the expected expenditure head wise is given in the action plan for 3rd Quarter (Oct. 2020- to Dec. 2020) Enclosed by annexure -4.1. This action plan contains 15,00,000/- unspent amount from the previous PLA and 1,10,00,000/- of additional amount.

Submitted for discussion and approval.

Resolution:- The matter was discussed and approved.

05/12 Progress in NBA Accreditation- SAR filling Status

The application for all the six eligible programs has been uploaded. The proposed visit date for the applied program was in March-April 2020. However, the dates for visits have been postponed due to recent lockdown situation. The visit will be notified later.

Submitted for discussion and approval.

Resolution:- The matter was discussed and approved.

06/12 Employability Skill Training and AMCAT test

Employability Skills training was done through four service providers shortlisted by NPIU through quotations.Generally the hiring process starts in month of August. For the present academic year, BoG may accord the permission for initiating the process from the shortlisted consultants.

AMCAT test for employability skill assessment was a service provider shortlisted by NPIU and in this regard BoG may accord approval for organising the AMCAT test from single selected consultant

However to enhance the employability of students the domain specific software training from EICT being conducted. The first phase training was started on 27th July 2020 and ending on 24th August 2020. The second phase training was started on 12th August . Total 617 students are undergoing these training branch wise details of training tabulated below and detailed course wise students list is attached vide annexure 6.1. The college has also assigned a mentor faculty for monitoring for each course.

Branch	B. Pharma	Civil Engineering	ECE	Electrical Engineering	Mechanical Engineering	Information Technology	Leather Technology	
Total	10	162	65	119	158	98	5	617

To further enhance the employability in emerging areas identified by NASSCOM training on "Robotics & Automation" Started from 16th July 2020 and total 110 hrs. of training has been completed till now. As per mandate of NPIU Rs 700 per hour will be paid for the training. Detail of students attending the training is mentioned below.

S. No.	Branch	No. of Students
1	Mechanical	16
2	Electrical	2
3	ECE	41
	Total	**59**

Submitted for information and approval.

Resolution:- The matter was discussed and approved.

07/12 Status of GATE class and Gate Test

The second phase of GATE training have been started from 4th August 2020 for final year students and the total of 430 hours of GATE 2021 training have been completed attached vide annexure-7.1.

GATE 2020 registration fee and test series fee have been reimbursed to 213 students amount is Rs 3,96,725/- only and details is attached vide annexure- 7.2.

As per GATE 2021 exam guideline allowed 3rd year students are also allowed to participate in the exam. In view of this the GATE training for the 3rd year student may be allowed.

The mock test once in two week is proposed for current 3rd year & 4th year students. Expenditure per mock test is 85,000/- as communicated earlier..

Department of Science and Technology, GoB has instructed MIT to set up GATE nodal center for all the Government Colleges of Bihar and same has been approved in 11th BOG held. For MIT Muzaffarpur students the mock test is being done on Hackerearth platform which has limitations of single hosting and also doesn't have the options to create all question types and calculator facilities as provided in GATE. In view of above a server for testing of students need to be developed. The approximate cost for development of the portal, storage capacity of portal and hosting for three years may be rupees Six lakh only.

Submitted for information, discussion and approval.

Resolution:- The matter was discussed and approved.

08/12 Financial Statement Head wise

	Procurement	Academic	Incremental Operating Cost	Total
Expenditure	6,60,00,000	3,02,31,859	82,49,248	10 ,44, 81,107
Project Life Allocation	7,26,00,000	3,63,00,000	1,21,00,000	12,10,00,000
Percentage Expenditure	90.91%	83.28%	68.18%	86.35 %

The detailed financial Statement head-wise is attached vide Annexure 8.1.

Submitted for discussion and approval.

Resolution:- The matter was discussed and approved.

09/12 Activities undertaken/participated by faculties and students during July to Sep, 2020

Detail of Activities undertaken/participated by the faculty/student is attached vide annexure 9.1.

Submitted for information and discussion.

Resolution:- The matter was discussed

10/12 Any other item

a. **MOOC'S Course**

309 students registered for 395 courses in Jan - May 2020 session of NPTEL, out of which 306 students qualified in 38 courses. The result has been published based on their average assignment score due to COVID19 pandemic. Details are attached vide 10.1.

NPTEL Details - Jan - May 2020						
Assignment Based Result (COVID 19 Special) Department & Year Wise Students						
	Final Year (2016 Batch)	**3rd Year (2017 Batch)**	**2nd Year (2018 Batch)**	**1st Year (2019 Batch)**	**M. Tech**	**Branch Total**
CE	0	6	56	3	-	65
ME	2	19	60	2	5	88
EE	1	2	32	0	-	35
EC	1	7	40	5	-	53
IT	0	4	32	24	-	60
LT	0	0	5	0	-	5
Pharmacy	0	0	0	0	-	0
Batch Total	**4**	**38**	**225**	**34**	**5**	**306**
Grand Total	**306**					

22 faculties including Principal registered in 38 courses and qualified in 35 courses. Department wise details are given in the table below.

	Department wise faculty Details							
Department	AS&H	CE	EC	IT	LT	ME	EE	Pharmacy
No of Faculties	3	4	6	2	3	4	0	0
Total	22							

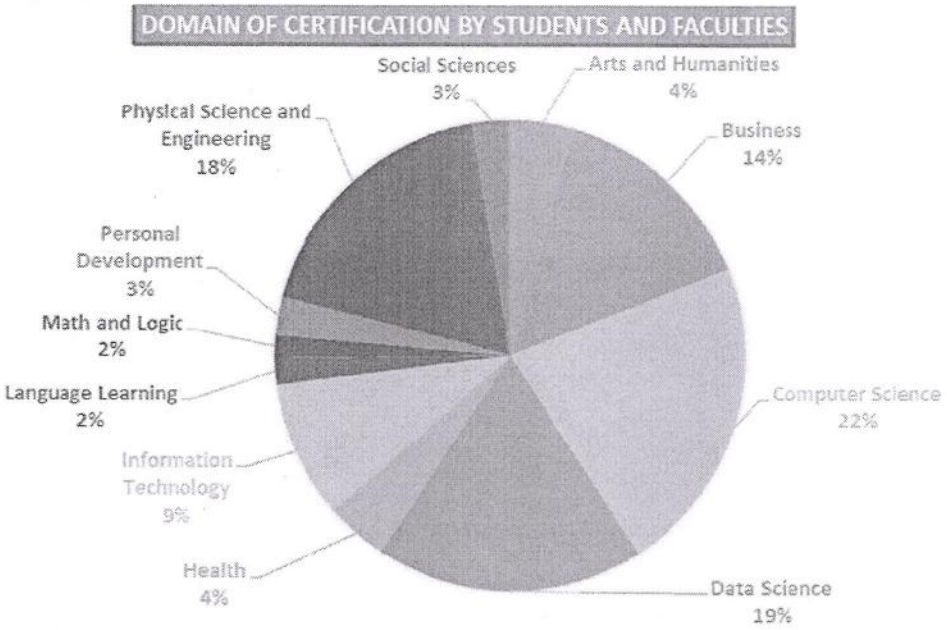
Enrollment for current session, Sep - Dec 2020, is going on till 21th Sep 2020. 297 students and 25 faculties have enrolled in 1060 and 69 courses respectively.

In addition to NPTEL, the courses from Coursera one of international portal for MOOC's courses has been undertaken by institute faculty and students and has performed once again excellently. The total 301 certificate courses have been completed by 61 faculty members. The total 2001

certification courses have been completed by 398 students. The detail of courses has been attached vide annexure-10.2.

	Coursera Details - Apr- Aug 2020 Department wise Faculties Details							
Department	AS & H	CE	EC	EE	IT	LT	ME	Pharmacy
No. Of Faculties	7	19	7	5	6	4	12	1
Total	61							

Coursera Details - Apr- Aug 2020 Department wise Student Details					
	Final Year (2016 Batch)	**3rd Year(2017 Batch)**	**2nd Year (2018 Batch)**	**1st Year (2019 Batch)**	**Branch Total**
CE	2	22	29	13	66
ME	2	11	18	14	45
EE	4	47	25	18	94
EC	9	26	24	18	77
IT	18	35	31	24	108
LT	1	1	2	1	5
Pharmacy	0	0	0	3	3
Batch Total	**36**	**142**	**129**	**91**	
Grand Total	**398**				



Submitted for information and discussion.

The matter was discussed and appreciated.

b. Internal audit report

Internal audit for the period 01.10.2019 to 31.03.2020 has been completed. No major observation has been given. The draft reports enclosed vide Annexure-10.3

Submitted for discussion and approval.

Resolution:- The matter was discussed and approved.

c. Smart India Hackthon 2020

Team "Rainbow 6" having 6 students and 2 teachers as mentors of the institute participated in the Grand Finale of SIH 2020- Software Edition which has, held online from 1st to 3 rd August 2020. It was attended virtually from IT Lab of the institute. The problem statement title was "Predictive Maintenance of Battery Life of Electric Vehicles " and problem statement ID was "PK368". The team won the Grand Finale SIH-20 Software Edition of their category for the said problem statement. Team won a cash prize of Rupees One Lakh. Institute also conducted own SIH competition second time in a row.

The detailed is attached vide Annexure 10.4..

Team rainbow

As this problem statement was to monitor and enhance the battery life of electric vehicles. To solve the problem statement an electric vehicle by modifying a bicycle was created by the students. Battery was attached with the bicycle and it was controlling the high torque motor using accelerator in the handle. The database obtained from numerous numbers of practical experiments were used to train and design algorithm. Based on the created dataset ride efficiency, battery health, and other required performance metric were evaluated. The created model was very well appreciated by the judging panels and the team won with flying colors.

However, in order to convert this idea into real life prototype there is a need to train the designed algorithm on dataset obtained from electric car. Due to absence of any such data in literature we have to create our own dataset by experimenting it on an electric car. Thus, it is requested to accord permission for purchase of old vehicle/use of old vehicle of institute and modification of same to an electric vehicle including other required accessories on which experiment can be successfully done and dataset can be obtained. The entire modification of vehicle along with different sets of Battery and sensors for data acquisition will cost 10 lakhs. The approval may be accorded in this respect.
Submitted for discussion and approval

Resolution:- The matter was discussed and appreciated by board.

d. Digitisation of Institute Logo

The college has an old logo of institute which doesn't have a good resolution. To make it attractive and clearly visible on digital form, a compensation for students for digitisation of logo has conducted and following four have been have been shortlisted. The details are attached vide annexure - 10.5. The board may accord any of the digitised logo.

Submitted for discussion and approval

Resolution:- The matter was discussed and it was suggested that Department of Science and Technology, GoB may be approached for approval.

e. Training on fundamentals of innovations with kits

An academic training; virtual training with the complementary kits is proposed to be provided for students to have the fundamental knowledge for innovations, to improve their thinking capabilities and help them in not only creating new ideas but also to give them a platform for executing the building blocks and learning by doing. Different kits for different sets of innovations has been developed by an organisation called edge fx. Electronics department have selected different Kits for the training of students which will be useful to other branches students too. As per selected kits this training will cost Rs 20,00,000/- which may be allowed under academic expenditures for graduate employability. The details of selected kits by Electronics department are attached vide annexure - 10.6.
Submitted for discussion and approval

Resolution:- The matter was discussed and approved.

Principal
Cum
Member Secretary
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BOG
MIT, Muzaffarpur
(Under TEQIP-III, GOI)

MUZAFFARPUR INSTITUTE OF TECHNOLOGY, MUZAFFARPUR

Muzaffarpur Bihar-842003 (Est. 1954)

(***Under the Department of Science & Technology, Bihar***)

Detailed agenda of 12th BOG meeting under TEQIP-III
Date- 24.08.2020, Time- 12:15 PM
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01/12 Action Taken Report of 11th BOG meeting

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10/10	Any other Item	Noted & Approved

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02/12 Proposed Activities under Twinning arrangement

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6.	% of faculty perusing collaborative research (10 %)	More faculties are being encouraged to do their research work	1. Out of l0 CRS projects awarded, 03 Co-PI's for CRS project are from NIT Patna.

		in collaboration with NIT Patna.	2. 23 faculties are doing Ph.D from NIT Patna
7.	No. of departmental partnership for joint research activities for applied research and technological development	1) While filing Patent interaction with concerned faculty of NITP should be made. 1) 2) A workshop on Patent awareness is being planned under twinning arrangement	a) 23 faculties are doing Ph.D lrom NIT-Patna. b) Out of l0 CRS projects awarded, 03 Co-PI's for CRS project are from NIT Patna c) A workshop on Patent awareness was planned under Twinning arrangement nut could not materialize due to lockdown..
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With this additional fund over the revised PLA the procurement component reached to Rs 7.26 Cr. Earlier we have completed the procurement activities of 6.60 Cr. For additional amount of 66,00,000/- the packages has been proposed for approval : Now for additional fund packages have been created.

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Branch	B. Pharma	Civil Engineering	ECE	Electrical Engineering	Mechanical Engineering	Information Technology	Leather Technology	
Total	10	162	65	119	158	98	5	617

To further enhance the employability in emerging areas identified by NASSCOM training on “Robotics & Automation” Started from 16th July 2020 and total 110 hrs. of training has been completed till now. As per mandate of NPIU we will be providing Rs 700 per hour for the same. A detail of students attending the training is mentioned below.

S. No.	**Branch**	**No. of Students**
1	Mechanical	16
2	Electrical	2
3	ECE	41
	Total	**59**

Submitted for information and approval.

07/12 Status of GATE class and Gate Test

The second phase of GATE training have been started from 4th August 2020 for final year students and the total of 430 hours of GATE 2021 training have been completed attached vide annexure- 7.1.

GATE 2020 registration fee and test series fee reimbursement have been made to 213 students amounting to Rs 3,96,725/- only details attached vide annexure- 7.2.

GATE 2021 exam will be organised by IIT Mumbai this year and allowed 3rd year students to participate in the exam. In view of this the GATE training for the 3rd year student may be allowed.

The mock test may be taken for current 3rd year & 4th year students once in two weeks. One test expenditure will stand 85,000/- as communicated earlier..

Department of Science and Technology, GoB has instructed to set up GATE nodal center for mock tests of GATE for all the Government Colleges of Bihar and same has been approved in 11th BOG held. For MIT Muzaffarpur students the mock test is being done on Hackerearth platform which has limitations of single hosting and also it don't have the options to create all question types and calculator facilities as provided in GATE. In view of above an own server for testing of students need to be developed. The approximate cost for development of the portal, storage capacity of portal and hosting for three years may charge rupees Six lakh only.

Submitted for information, discussion and approval.

08/12 Financial Statement Head wise

	Procurement	Academic	Incremental Operating Cost	Total
Expenditure	6,60,00,000	3,02,31,859	82,49,248	10,44,81,107
Project Life Allocation	7,26,00,000	3,63,00,000	1,21,00,000	12,10,00,000
Percentage Expenditure	90.91%	83.28%	68.18%	86.35%

The detailed financial Statement head-wise is attached vide Annexure 8.1.

Submitted for discussion and approval.

09/12 Activities undertaken/participated by faculties and students during July to Sep, 2020

Detail of Activities undertaken/participated by the faculty/student is attached vide annexure 9.1.

Submitted for information and discussion.

10/12 Any other item

a. **MOOC'S Course**

309 students had registered for 395 courses in Jan - May 2020 session of NPTEL, out of which 306 students qualified in 38 courses. The result has been published based on their average assignment score due to COVID19 pandemic. Details are attached vide 10.1.

NPTEL Details - Jan - May 2020						
Assignment Based Result (COVID 19 Special) **Department & Year Wise Students**						
	Final Year (2016 Batch)	**3rd Year (2017 Batch)**	**2nd Year (2018 Batch)**	**1st Year (2019 Batch)**	**M. Tech**	**Branch Total**
CE	0	6	56	3	-	65
ME	2	19	60	2	5	88
EE	1	2	32	0	-	35
EC	1	7	40	5	-	53
IT	0	4	32	24	-	60
LT	0	0	5	0	-	5
Pharmacy	0	0	0	0	-	0
Batch Total	**4**	**38**	**225**	**34**	**5**	**306**
Grand Total	**306**					

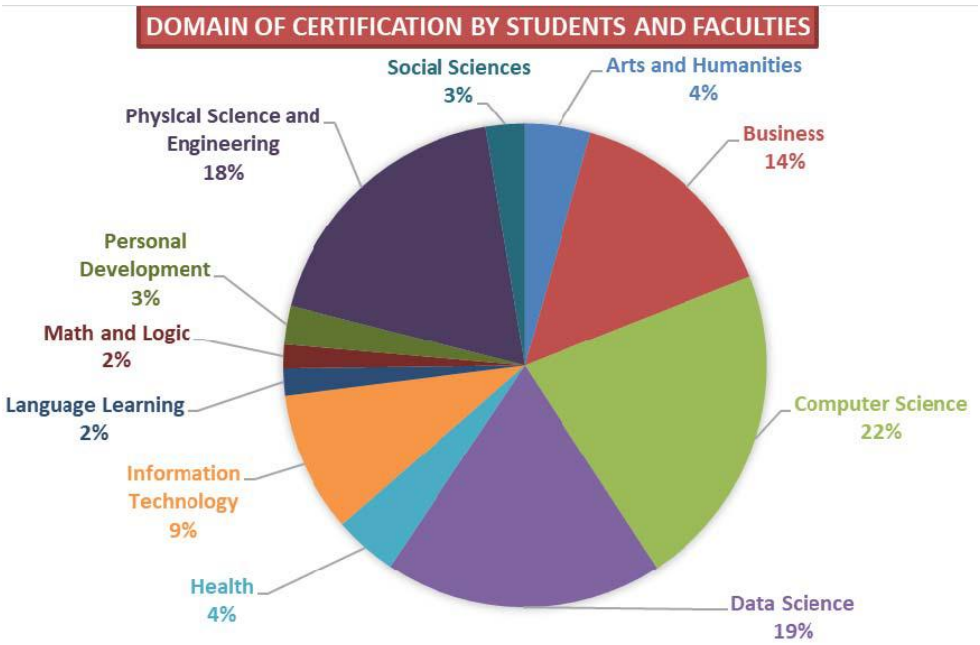
22 faculties (Including Principal, Dr. J N Jha) have registered in 38 courses are qualified in 35 courses. Department wise details are given in the table below.

	Department wise faculty Details							
Department	AS&H	CE	EC	IT	LT	ME	EE	Pharmacy
No of Faculties	3	4	6	2	3	4	0	0
Total	22							

Enrollment for current session, Sep - Dec 2020, is going on till 21th Sep 2020. 297 students and 25 faculties have enrolled in 1060 and 69 courses respectively.
In addition to NPTEL, the courses from Coursera one of international portal for MOOC's courses has been undertaken by institute faculty and students and has performed once again excellently. The total 301 certificate courses have been completed by 61 faculty members. The total 2001 certification courses have been completed by 398 students. The detail of courses has been attached vide annexure-10.2.

	Coursera Details - Apr- Aug 2020 Department wise Faculties Details							
Department	AS & H	CE	EC	EE	IT	LT	ME	Pharmacy
No. Of Faculties	7	19	7	5	6	4	12	1
Total	61							

Coursera Details - Apr- Aug 2020 Department wise Student Details					
	Final Year (2016 Batch)	**3rd Year(2017 Batch)**	**2nd Year (2018 Batch)**	**1st Year (2019 Batch)**	**Branch Total**
CE	2	22	29	13	66
ME	2	11	18	14	45
EE	4	47	25	18	94
EC	9	26	24	18	77
IT	18	35	31	24	108
LT	1	1	2	1	5
Pharmacy	0	0	0	3	3
Batch Total	**36**	**142**	**129**	**91**	
Grand Total	**398**				



b. Internal audit report

Internal audit period 01.10.2019 to 31.03.2020 has been completed. No major observation has been given. The draft reports of auditor being enclosed vide Annexure-10.3

Submitted for discussion and approval

c. Smart India Hackthon 2020

Team "Rainbow 6" having 6 students and 2 mentors of the institute participated in the Grand Finale of SIH 2020- Software Edition, held online from 1st to 3rd August 2020. It was attended virtually from IT Lab of the institute. The problem statement title was "Predictive Maintenance of Battery Life of Electric Vehicles " and problem statement ID was "PK368". The team won the Grand Finale SIH-20 Software Edition of their category for the said problem statement. Team won a cash prize of Rupees One Lakh. Institute have own SIH competition second time in a row.

The detailed is attached vide Annexure 10.4..

Team rainbow

As this problem statement was to monitor and enhance the battery life of electric vehicles. To solve the problem statement an electric vehicle by modifying a bicycle was created by the students. Battery was attached with the bicycle and it was controlling the high torque motor using accelerator in the handle. The database obtained from numerous numbers of practical experiments were used to train and design algorithm. Based on the created dataset ride efficiency, battery health, and other required performance metric were evaluated. The created model was very well appreciated by the judging panels and the team won with flying colors.

However, in order to convert this idea into real life prototype there is a need to train the designed algorithm on dataset obtained from electric car. Due to absence of any such data in literature we have to create our own dataset by experimenting it on an electric car. Thus, it is requested to accord permission for purchase of old vehicle/use of old vehicle of institute and modification of same to an electric vehicle including other required accessories on which experiment can be successfully done and dataset can be obtained. The entire modification of vehicle along with different sets of Battery and sensors for data acquisition will cost 10 lakhs. The approval may be accorded in this respect.

Submitted for discussion and approval

d. Digitisation of Institute Logo

We have old logo of institute and not having bad resolution. To make it attractive and clearly visible on digital form. For the same we have done a compensation for students for digitisation of logo and have been shortlisted four The details are attached vide annexure - 10.5. The board may accord any of the digitised logo.

Submitted for discussion and approval

e. Training on fundamentals of innovations with kits

An academic training, virtual training with the complementary kits is proposed to be provided for students to have the fundamental knowledge for innovations, to improve their thinking capabilities and help them in not only creating new ideas but also give them a platform for executing them with the building blocks provided and learning by doing. Different kits for different sets of innovations has been developed by an organisation called edge fx. Electronics department have selected different Kits for the training of students which will be useful to other branches students too. As per selected kits this training will cost Rs 20,00,000/- which may be allowed under academic expenditures for graduate employability. The details of selected kits by Electronics department are attached vide annexure - 10.6.

Submitted for discussion and approval

Annexure- 3.1

NPIU

राष्ट्रीय परियोजना कार्यान्वयन एकक
(तकनीकी शिक्षा में विश्व बैंक सहायक परियोजना के कार्यान्वयन के लिए भारत सरकार, मानव संसाधन विकास मंत्रालय का एकक)
National Project Implementation Unit
(A UNIT OF MINISTRY OF HUMAN RESOURCE DEVELOPMENT, GOVERNMENT OF INDIA FOR IMPLEMENTATION OF WORLD BANK ASSISTED PROJECTS IN TECHNICAL EDUCATION)

No. NPIU/TEQIP/2020/ 31.07.2020

To,
Principal
Department of Civil Engineering
Muzaffarpur Institute of Technology
P.O., M.I.T. Lakshmi Chowk
Muzaffarpur – 842 003 BIHAR

Subject: Additional Project Life Allocation (PLA) through re-appropriation due to satisfactory performance in terms of performance benchmarks and / or expenditure (Stage 2)

Dear Sir/ Madam,

As you are aware that re-appropriation (additional/ curtailment) of project life allocation (PLA) was proposed in Stage-2 considering both percentage expenditure (of revised PLA) as well as achievement of performance benchmarks and contribution in achievement of DLIs limited to 10% of revised PLA.

2. It is unfortunate that, in Stage 2, few institution/ATU were considered as low performing institution/ATU and hence the curtailment of allocation was done. However, the additional funds were not provided due to limited funds available in particular component.

3. Now, I congratulate your institution for getting additional PLA for Stage 2. The revised PLA is as under:

(Rs. in Cr.)

State	Name of the Institute/ATU	Sub comp.	PLA	Total Exp. (Stage 2)	%age of expenditure	Additional 10% of PLA	Revised PLA
Bihar	Muzaffarpur Institute of Tech, Muzaffarpur	1.1	11.00	7.44	67.66	1.10	12.10

The additional funds shall further be considered spending on Procurement, Academics & IOC component in the ratio of 60:30:10 for 1.1 institutions, 40:50:10 for 1.2 & 1.3 ATUs and 50:40:10 for 1.3 institutions.

4. However, with additional funds, your responsibility also increases due to revised PLA. I request you to prepare a plan for speedy spending of this additional fund by September 2020.

Yours faithfully,

Prof (Dr.) P.M Khodke
Central Project Advisor

CC: (I) SPIU – *By email*
(ii) TEQIP Coordinator – *By email*

कोपिया कॉरपोरेट सुइट्स, तृतीय तल
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वैब साईट / Web site : www.npiu.nic.in
ई–मेल / E-mail : npiu-mhrd@gov.in

Annexure 3.2

Muzaffarpur Institute of Technology, Muzaffarpur
Payment already done after procurement

Name of Department	Package Name	Procurement Method	Installation Status	Amount
IT	MITM/INSTUTIONAL/MICROSOFT CAMPUS LICENSE	DIRECT CONTRACT	Completed	1,042,176
	MITM/IT/Oracle Software	DIRECT CONTRACT	Completed	1,386,500
	MITM/IT/Networking	Shopping	Completed	743,400
	MITM/IT/SOFTWARE(NETSIM)	Shopping	Completed	1,249,999
	MITM/IT/AC	Shopping	Completed	455,362
	MITM/INSTITUTIONAL/COMPUTER-01	SHOPPING	Completed	4,680,954
CIVIL	MIT/CIVIL/CONCRETE LAB	SHOPPING	Completed	1,475,637
	MIT/CIVIL/ENVIRONMENTAL LAB	SHOPPING	Completed	2,493,576
	MIT/CIVIL/HIGHWAY ENGINEERING	SHOPPING	Completed	1,063,099
	MIT/CIVIL/GEOTECHNICAL LAB	SHOPPING	Completed	1,319,240
	MIT/CIVIL/SURVEYING LABORATORY	Shopping	Completed	826,585
	MIT/CIVIL/FLUID MECHNAICS LABORATORY	Shopping	Completed	133,340
	MIT/CIVIL/MOS LAB	SHOPPING	Completed	696,908
	MITM/CIVIL/BENTLEY	Shopping	Completed	1,983,827
ME	MITM/MECH/STEAM POWER LAB	SHOPPING	Completed	1,263,780
	MITM/MECHANICAL/AUTOCAD-2018	DIRECT CONTRACT	Completed	684,400
	M.I.T/MECH/ENGG. MECHANICS LAB	SHOPPING	Completed	506,810
	M.I.T/MECH/HEAT TRANSFER	SHOPPING	Completed	70,800
	M.I.T/MECH/RAC LAB	SHOPPING	Completed	610,060
	MITM/Mech/IC Engine lab	Shopping	Completed	2,382,963
	MITM/MECH/WORKSHOP	SHOPPING	Completed	1,844,576
ECE	MITM/ECE/INT. INST-LAB	SHOPPING	Completed	274,645
	MITM/ECE/VLSI-Lab	SHOPPING	Completed	49,560
	MITM/ECE/MICROPROCESSOR LAB	SHOPPING	Completed	115,699
	MITM/ECE/DE-Lab	SHOPPING	Completed	154,775
	MITM/ECE/BE LAB	SHOPPING	Completed	247,481
	MITM/ECE/AE - LAB	Shopping	Completed	860,220
	MITM/ECE/MATERAIL-LAB	Shopping	Completed	770,658
	MITM/ECE/ECOM-Lab	SHOPPING	Completed	242,667
	MITM/ECE/PROTEUS	Direct contract	Completed	1,539,900
	MITM/ECE/SSP-LAB	SHOPPING	Completed	69,207
EE	MITM/EE/PPAS-LAB	SHOPPING	Completed	1,736,370
	MITM/EE/NT1 LAB	SHOPPING	Completed	71,036
	MITM/EE/EMI	SHOPPING	Completed	1,031,438
	MITM/EE/EM-DSO-LAB	SHOPPING	Completed	1,416,000
	MITM/EE/LCT LAB	SHOPPING	Completed	484,809
	MITM/EE/BEE-LAB	SHOPPING	Completed	662,275
	MITM/EE/NT2 LAB	SHOPPING	Completed	96,760
	MITM/EE/Power Electronics Lab	Shopping	Completed	1,475,189
	MITM/EE/EM-LAB	SHOPPING	Completed	3,422,708
LT	MITM/LT/PROCAM SOFTWARE	Direct Contracting	Completed	354,000
	MITM/LT/Leather product lab	Shopping	Completed	1,150,500
	Aluminium window work	Direct Contracting	Completed	69,173
	MITM/LT/Principal material testing lab	Shopping	Completed	1,408,920
	CIVIL WORK	Direct Contracting	Completed	38,486
	MITM/INSTUTIONAL/COMPUTER CHAIR	GEM	Completed	337,500
	MITM/INSTUTIONAL/EXECUTIVE TABLE	GEM	Completed	255,600
	MITM/INSTUTIONAL/REVOLVING CHAIR	GEM	Completed	35,400
	MITM/INSTITUTIONAL/TALLY	DIRECT CONTRACT	Completed	20,500
	MITM/INSTUTIONAL/CHAIR	GEM	Completed	304,000
	MITM/INSTUTIONAL/Expandable Book Rack	GEM	Completed	17,900
	MITM/INSTITUTIONAL/UPS	GEM	Completed	1,155,000
	MITM/INSTITUTIONAL/Projector	GEM	Completed	1,582,930

INSTITUTIONAL	MITM/INSTITUTIONAL/Academic	GEM	Completed	208,000
	MITM/INSTITUTIONAL/Tpo office	GEM	Completed	738,791
	MITM/INSTITUTIONAL/Examination Section	GEM	Completed	73,850
	MITM/ECE/FIREWALL	DIRECT CONTRACT	Completed	1,498,600
	MITM/INSTITUTIONAL/Refurbishment	Civil Work	Completed	304,425
	MITM/INSTITUTIONAL/SERVER	Direct Contact	Completed	967,600
	MITM/INSTITUTIONAL/TEQIP Office	GEM	Completed	27,000
	MITM/INSTITUTIONAL/COMPUTER	Shopping	Completed	4,979,628
	MITM/INSTITUTIONAL/GATE 2020 Question Bank	Shopping	Completed	239,430
	MITM/CHEMISTRY LAB	Shopping	Completed	239,817
	MITM/PHYSICS LAB	Shopping	Completed	326,152
	MITM/INSTITUTIONAL FURNITURE/WORKSTATION	Shopping	Completed	1,248,487
	MITM/Institutional/Networking in M.tech Lab	Shopping	Completed	642,156
	Civil Works	Shopping	Completed	4,201,836
	MITM/INSTITUTIONAL/Lan network	Shopping	Completed	602,366
	MITM/INSTITUTIONAL/EBOOK	Direct Contract	Completed	1,336,563
			Total	**66,000,000**

Package for approval

INSTITUTIONAL	MITM/INSTITUTIONAL/PRINTER	GEM		501000
	MITM/INSTITUTIONAL/DESKTOP	GEM		3500000
	MITM/INSTITUTIONAL/UPS	GEM		770000
	MITM/INSTITUTIONAL/AC	GEM		230000
	MITM/INSTITUTIONAL/CHAIR	GEM		233000
	MITM/INSTITUTIONAL/CIVIL WORK	NCB		550000
	MITM/INSTITUTIONAL/NETWORKING	NCB		608500
	MITM/INSTITUTIONAL/E-LEARNING	GEM		544000
		Total		**6,936,500**

Summary:-

	Number of package	**Amount**
Payment already made	69	**66,000,000**
Package for approval	8	**6,936,500**
Total	**74**	**72,936,500**

Annexure- 4.1

TEQIP-III Action Plan for October, 2020 - December, 2020

Subcomponent : 1.1

Name of the Institute : Muzaffarpur Institute of Technology, Muzaffarpur

(Amount in Rs.)

Heads		Sub-Heads		October, 2020 - December, 2020						
				Oct-20		Nov-20		Dec-20		Total Expenditure
				Activities	Expenditure	Activities	Expenditure	Activities	Expenditure	
Procurement of goods	1.1.1.1	**Equipments** (for hostel, sports and any non academic activity not permitted)		Computerfor library, printer for Library and TEQIP office,ups, ac etc.	2,773,000.00		2,500,000.00		0.00	5,273,000
	1.1.1.2	**Learning resources** (e-books, e-journals, softwares, text book etc.)		Pentab,camera,headphone	544,000.00		0.00		0.00	544,000
	1.1.1.3	**Furniture** (for hostel, sports and any non academic activity not permitted, but allowed for TEQIP Cell)		Chair without arm	233,000.00		0.00		0.00	233,000
	1.1.1.4	**Minor civil works** (for hostel, sports and any non academic activity not permitted, no new building), (repair,maintenance & extension allowed)		civil works in library	550,000.00		0.00		0.00	550,000
	1.1.2.1	**Improve student learning** 1. IIT/ NIT training at IIT/NIT or in parent institute (training fees, honorarium to faculty, TA/DA of students or resource person); 2. Induction Training for 1st year & lateral entry students in 2nd year - Training of faculty mentors by induction coordinators already trained; lectures on Universal human values, Crash course on communication skills; crash/ bridge courses on conceptual learning on mathematics and physics, expenditure on art and craft training, physical activities (own faculty with honorarium/ hired experts) 3. Expenditure on Student Excellence and Learning Programme (SELP-art of living) 4. GATE Orientation Programme for all students, 5. GATE Preparation Classes from 3rd year onwards; 6. GATE Registration Fee (only for final year students) 7. Career Counselling for Student; appointment of counsellor (internal/external)- honorarium, TA/DA etc. 8.Employability / Psychometric/ Diagnostic Test of all students; 7. Honorarium for Remedial Classes for failure / academically low performing students; 8. Peer Learning- incentivizing students 9. Student Visits to IIT & R&D organizations; 10. Institutional memberships for professional societies		1. Expert Lecture from IIT Patna and NIT Patna 2. Workshop on communication skills; Verbal Ability by service provider or experts 3. GATE Orientation Programme for all students, 4. GATE Preparation Classes from 3rd year 5. GATE Registration Fee (only for final year students) 6. Career Counselling for Civil and Mechanical Student; 7. Honorarium for Remedial Classes for failure / academically low performing students; 8. Peer Learning 9. Student Visits to IIT Patna & R&D organizations; 10. Institutional memberships for professional societies 11.Registration Fees and TA/DA for students participating in Tech Fest of IIT/NIT; 12. Exposure visits of social backward and girls students to reputed organisations in IITs 13. Expenditure of conduct of practicals for students in other nearby institute on advance equipments	200,000.00	1. Expert Lecture from IIT Patna and NIT Patna 2. Workshop on communication skills; Verbal Ability by service provider or experts 3. GATE Orientation Programme for all students, 4. GATE Preparation Classes from 3rd year 5. GATE Registration Fee (only for final year students) 6. Career Counselling for Civil and Mechanical Student; 7. Honorarium for Remedial Classes for failure / academically low performing students; 8. Peer Learning 9. Student Visits to IIT Patna & R&D organizations; 10. Institutional memberships for professional societies 11.Registration Fees and TA/DA for students participating in Tech Fest of IIT/NIT; 12. Exposure visits of social backward and girls students to reputed organisations in IITs 13. Expenditure of conduct of practicals for students in other nearby institute on advance equipments	300,000.00	1. Induction Training for 1st year & lateral entry students in 2nd year - Training of faculty mentors by induction coordinators already trained; lectures on Universal human values, Crash course on communication skills; crash/ bridge courses on conceptual learning on mathematics and physics, expenditure on art and craft training, physical activities (own faculty with honorarium/ hired experts) 2.GATE Preparation Classes from 3rd year onwards; 3. GATE Registration Fee (only for final year students) 4. Honorarium for Remedial Classes for failure / academically low performing students; 5. Student Visits to IIT & R&D organizations; 6.Registration Fees and TA/DA for students participating in Tech Fest of IIT/NIT; 7. Exposure visits of social backward and girls students to reputed organisations 8. Expenditure of conduct of practicals for students in other nearby institute on advance equipments	500,000.00	1,000,000.00
	1.1.2.2	**Research Assistantships** **1.** Research Assistantship in engineering & applied science discipline for full time Ph.D. students excluding QIP candidates or any other scheme;								0.00

1.1.2.3	**Graduates employability** 1. Awareness drive/ workshops about the idea of 'Innovation' & 'Start-up 2. Continuous Drive of Competitions: Smart India Hackathon, Idea stage, prototype stage, business plan, etc every month for first to final year students 3. Soft Skill training (Industry Readiness); 4. Remedial coaching for first to final year students in Communication Skills, quantative ability, logical reasoning as observed in AMCAT employability test 5.Bridge Courses for enhancing employability/placement 6. Conducting training on NASSCOM future skills 7. Specialized industry based training programmes by industry 8. Organising motivational talks by local enterpreneurs 9. E-summits, conferences, seminars and other Entrepreneurship fests (organising as well as attending) 10. Awareness of job potential by arranging alumni talks 11. Formation of students clubs for domain and general arears 12.Operation / maintenance/ Consumbales on tinkering labs 13. Student training on interpersonal skills		1. Awareness drive/ workshops about the idea of 'Innovation' & 'Start-up 2. Continuous Drive of Competitions: Smart India Hackathon, Idea stage, prototype stage, business plan, etc every month for first to final year students 3.Bridge Courses for enhancing employability/placement 4. Specialized industry based training programmes by industry 5. Organising motivational talks by local enterpreneurs 6. Formation of students clubs for domain and general arears 7. Student training on interpersonal skills	1,000,000.00	1. Awareness drive/ workshops about the idea of 'Innovation' & 'Start-up 2. Continuous Drive of Competitions: Smart India Hackathon, Idea stage, prototype stage, business plan, etc every month for first to final year students 3.Bridge Courses for enhancing employability/placement 4. Specialized industry based training programmes by industry 5. Organising motivational talks by local enterpreneurs 6. Formation of students clubs for domain and general arears 7. Student training on interpersonal skills	1,200,000.00	1. Awareness drive/ workshops about the idea of 'Innovation' & 'Start-up 2. Continuous Drive of Competitions: Smart India Hackathon, Idea stage, prototype stage, business plan, etc every month for first to final year students 3.Bridge Courses for enhancing employability/placement 4. Specialized industry based training programmes by industry 5. Organising motivational talks by local enterpreneurs 6. Formation of students clubs for domain and general arears 7. Student training on interpersonal skills	200,000.00	2,400,000.00
1.1.2.4	**Faculty/Staff Development and motivation** 1. Short Term Training Programmes (STTP) in house; 2. Registration fee and TA/DA for STTP in other reputed institutes; 3. IIT training to faculty at IIT or in parent institute; 4. Attending Conferences/ Seminars / Workshops 5. Support Staff training, 6. Counsilling of faculty and staff, particularity for disadvantageous sections of the society 7. Qualification upgradation of faculty and staff 8. Faculty training on NASSCOM future skills 9. Faculty training on digital pedagogy 10. Motivational talks for faculty and staff for improving efficiancy and belonginess 11. Faculty and staff training in industry (registration fees, TA/DA, accommodation etc.)		1. Induction Trainning for faculties through NITTRShort Term Training Programmes (STTP) in house; 2. Registration fee and TA/DA for STTP in other reputed institutes; 3. Attending Conferences/ Seminars / Workshops 4. Support Staff training, 5. Qualification upgradation of faculty and staff 6. Faculty training on NASSCOM future skills 7. Faculty training on digital pedagogy 8. Motivational talks for faculty and staff for improving efficiancy and belonginess 9. Faculty and staff training in industry (registration fees, TA/DA, accommodation etc.)	100,000.00	1. Short Term Training Programmes (STTP) in house; 2. Registration fee and TA/DA for STTP in other reputed institutes; 3. Attending Conferences/ Seminars / Workshops 4. Qualification upgradation of faculty and staff 5. Faculty training on NASSCOM future skills 6. Faculty training on digital pedagogy 7. Faculty and staff training in industry (registration fees, TA/DA, accommodation etc.)	300,000.00	1. Registration fee and TA/DA for STTP in other reputed institutes; 2. Attending Conferences/ Seminars / Workshops 3. Faculty training on NASSCOM future skills 4. Faculty training on digital pedagogy 5. Faculty and staff training in industry (registration fees, TA/DA, accommodation etc.)	300,000.00	700,000.00

Academic Processes	1.1.2.5	**Research and development** 1. Attending Conferences/ Seminars/ Workshops for UG/PG/Ph.D students within or outside institute; 2. Spares and consumables for UG/ PG student research projectp; 3. Seed Money for R & D for faculty research projects; 4. Providing seed money to students for their projects. (Incentivisation through prizes, appreciation etc.); 4. Publication in peer reviewed journals having citation & impact factor and scopus index; 5. Fees and facilitation charges for patent filing for faculty and students, 6. Workshops on wrting collaborative research proposals 7. Inhouse product development by students 8. Expenses for using infrastructure facilities (rent) in other organizations; 9. Expense on testing/characterization of samples of R&D projects undertaken by faculty/students 10. Appointment of retired teachers from IITs/NITs/other reputed institutions as Senior Research Advisor (salary/honorarium - as approved by competent authority of institution 11. Additional funding for soft activities in collaborative reserch scheme		1. Attending Conferences/ Seminars/ Workshops for UG/PG students within or outside institute; 2. Spares and consumables for UG/ PG student research projects; 3. Providing seed money to students for their projects. (Incentivisation through prizes, appreciation etc.); 4. Fees and facilitation charges for patent filing for faculty and students, 5. Inhouse product development by students 6. Expense on testing/characterization of samples of R&D projects undertaken by faculty/students 7 Additional funding for soft activities in collaborative reserch scheme	100,000.00	1. Attending Conferences/ Seminars/ Workshops for UG/PG students within or outside institute; 2. Spares and consumables for UG/ PG student research projects; 3. Providing seed money to students for their projects. (Incentivisation through prizes, appreciation etc.); 4. Fees and facilitation charges for patent filing for faculty and students, 5. Inhouse product development by students 6. Additional funding for soft activities in collaborative reserch scheme	100,000.00	1. Attending Conferences/ Seminars/ Workshops for UG/PG students within or outside institute; 2. Spares and consumables for UG/ PG student research projects; 3. Providing seed money to students for their projects. (Incentivisation through prizes, appreciation etc.); 4. Fees and facilitation charges for patent filing for faculty and students,	100,000.00	300,000.00
	1.1.2.6	**MOOCs and digital learning** 1. Appearing for examination and Certification fees for online courses (MOOC's); 2. Development of MOOC's/ Online courses 3.Incentivizing faculty for generating digital learning material, content development etc.		1. Appearing for examination and Certification fees for online courses (MOOC's); 2. Development of MOOC's/ Online courses 3.Incentivizing faculty for generating digital learning material, content development etc.	40,000.00	1. Appearing for examination and Certification fees for online courses (MOOC's);	50,000.00	1. Development of MOOC's/ Online courses 2.Incentivizing faculty for generating digital learning material, content development etc.	70,000.00	160,000.00
	1.1.2.7	**Mentoring/Twinning system** 1. Two way faculty, staff and student exchange programs for training and academic activities; 2. Joint R & D; Arranging seminars, academic meetings and conferences for students and faculty; 3. Organising Industry partnerships for joint R&D, internship and placement activities; 4. Learning forums for improving governance practices, institutional management and reforms; 5. Joint Advisory or consultancy services; any other activities as deemed mutually appropriate 6. Joint placement drives		1. Two way faculty, staff and student exchange programs for training and academic activities; 2. Joint R & D; Arranging seminars, academic meetings and conferences for students and faculty; 3. Organising Industry partnerships for joint R&D, internship and placement activities; 4. Learning forums for improving governance practices, institutional management and reforms; 5. Joint Advisory or consultancy services; any other activities as deemed mutually appropriate 6. Joint placement drives	50,000.00	1. Two way faculty, staff and student exchange programs for training and academic activities; 2. Joint R & D; Arranging seminars, academic meetings and conferences for students and faculty; 3. Organising Industry partnerships for joint R&D, internship and placement activities; 4. Learning forums for improving governance practices, institutional management and reforms; 5. Joint Advisory or consultancy services; any other activities as deemed mutually appropriate	50,000.00	1. Two way faculty, staff and student exchange programs for training and academic activities; 2. Joint R & D; Arranging seminars, academic meetings and conferences for students and faculty; 3. Organising Industry partnerships for joint R&D, internship and placement activities; 4. Learning forums for improving governance practices, institutional management and reforms; 5. Joint Advisory or consultancy services; any other activities as deemed mutually appropriate	50,000.00	150,000.00

	1.1.2.8	**Reforms, governance** 1. Organizing workshops for faculty so as to implement AICTE model curriculum 2. Meeting expenditure for various authorities like ICC, BoS, Academic Council/ Senate, BoG 3. Accreditation & UGC Autonomy fees, Workshop on OBE/SAR filing, mock visits through expetrs - TA/DA, honorarium etc. 4. 360 degree Student Feedback & Faculty Appraisal (designing fresh system or operating cost of existing students feedback system) 5. Workshops / meetings / inviting experts for implementation of AICTE examination policy for measuring outcomes		Reforms, governance 1. Meeting expenditure for various authorities like ICC, BoS, Academic Council/ Senate, BoG 2 Accreditation & UGC Autonomy fees, Workshop on OBE/SAR filing, mock visits through expetrs - TA/DA, honorarium etc. 3. 360 degree Student Feedback & Faculty Appraisal (designing fresh system or operating cost of existing students feedback system)	200,000.00	1. Organizing workshops for faculty so as to implement AICTE model curriculum 2. Meeting expenditure for various authorities like ICC 3. Accreditation & UGC Autonomy fees, Workshop on OBE/SAR filing, mock visits through expetrs - TA/DA, honorarium etc.	200,000.00	1. Organizing workshops for faculty so as to implement AICTE model curriculum 2. Meeting expenditure for various authorities like ICC, BoS, Academic Council/ Senate, BoG 3. Accreditation & UGC Autonomy fees, Workshop on OBE/SAR filing, mock visits through expetrs - TA/DA, honorarium etc. 5. Workshops / meetings / inviting experts for implementation of AICTE examination policy for measuring outcomes	300,000.00	700,000.00
	1.1.2.9	**Management Capacity development** 1. Management Capacity Building programmes at IIM; 2. Organizing leadership programms by IIM faculty in parent institute 3. NPIU workshops, etc		1. Management Capacity Building programmes at IIM; 2. Organizing leadership programms by IIM faculty in parent institute 3. NPIU workshops, etc	50,000.00	1. Management Capacity Building programmes at IIM; 2. Organizing leadership programms by IIM faculty in parent institute 3. NPIU workshops, etc	50,000.00	1. Management Capacity Building programmes at IIM; 2. Organizing leadership programms by IIM faculty in parent institute 3. NPIU workshops, etc	50,000.00	150,000.00
	1.1.2.10	**Hiring Consultancy Services** 1. Three ways for carrying out any academic activity a) internal faculty b) external facaulty c) outsourced service provider, 2. External faculty can be invited on remuneration		1. External faculty hiring on remuneration basis (Rs. 700/ per hour or Rs. 4000 to Rs. 5000 per day as the case may be). 2 Hiring for GATE test plateform for test	500,000.00	1. External faculty hiring on remuneration basis (Rs. 700/ per hour or Rs. 4000 to Rs. 5000 per day as the case may be).	200,000.00			700,000.00
	1.1.2.11	**Industry-Institute Interaction** 1. Expenditure on TA/DA registeration fees for Internships; 2.Inviting Industry expert for lectures; 3. Placement Activities & Hospitality for the companies coming for placement 4.TA/DA of students and faculty for Industry Visits, 5. Arranging HR summit for placement 6. Preparation and printing of brochure for placement 7. Expenditure on submission of colloborative reserach proposals to the industry 8.Conducting workshops for GD/PI, preparation of CV for placement, mock interviews 9. Conduct of Alumni meet for carrier guidance and placement activities 10. Arranging pool campus 11. Participation of industry experts in curriculum		1.Inviting Industry expert for lectures; 3. Placement Activities & Hospitality for the companies coming for placement 3 TA/DA of students and faculty for Industry Visits, 4. Preparation and printing of brochure for placement 5.Conducting workshops for GD/PI, preparation of CV for placement, mock interviews 6. Conduct of Alumni meet for carrier guidance and placement activities 7. Participation of industry experts in curriculum development through ICC. 8. TA/DA and honorarium for industry experts assisting in delivery of curriculum	50,000.00	1.Inviting Industry expert for lectures; 3. Placement Activities & Hospitality for the companies coming for placement 3 TA/DA of students and faculty for Industry Visits, 4. Preparation and printing of brochure for placement 5.Conducting workshops for GD/PI, preparation of CV for placement, mock interviews 6. Conduct of Alumni meet for carrier guidance and placement activities 7. Participation of industry experts in curriculum development through ICC. 8. TA/DA and honorarium for industry experts assisting in delivery of curriculum	150,000.00	1.Inviting Industry expert for lectures; 3. Placement Activities & Hospitality for the companies coming for placement 3 TA/DA of students and faculty for Industry Visits, 4. Preparation and printing of brochure for placement 5.Conducting workshops for GD/PI, preparation of CV for placement, mock interviews 6. Conduct of Alumni meet for carrier guidance and placement activities 7. Participation of industry experts in curriculum development through ICC. 8. TA/DA and honorarium for industry experts assisting in delivery of curriculum	150,000.00	350,000.00
Operating Cost	1.1.3.1	**Consumables**		Purchase of consumables for office & Laboratories (Glass,Chemicals,Batterries,Cartridge,Boards, Workshop raw material etc.	100,000.00	Purchase of consumables for office & Laboratories (Glass,Chemicals,Batterries,Cartridge,Boards,Workshop raw material etc.	80,000.00	Purchase of consumables for office & Laboratories (Glass,Chemicals,Batterries,Cartridge,Boards,Workshop raw material etc.	80,000	260,000.00
	1.1.3.2	Operation and maintenance of equipments		AMC, Servicing and repairing (Maintenance of furniture and equipment including computers and other assets)	80,000.00	AMC, Servicing and repairing (Maintenance of furniture and equipment including computers and other assets)	60,000.00	AMC, Servicing and repairing (Maintenance of furniture and equipment including computers and other assets)	70,000	210,000.00
	1.1.3.3	**Office expensses** (The activities include: stationary; printing, etc.)		Stationary, papers,etc.	70,000.00	Stationary, papers,etc.	30,000.00	Stationary, papers,etc.	60,000	160,000.00
	1.1.3.4	**Meetings** (only project related meetings)		Project Related Meetings	80,000.00	Project Related Meetings	80,000.00	Project Related Meetings	90,000	250,000.00
	1.1.3.5	**Hiring of Vehicles** (only for project activities)		Hiring of Vehicles For Project related activities	40,000.00	Hiring of Vehicles For Project related activities	40,000.00	Hiring of Vehicles For Project related activities	30,000	110,000.00
	1.1.3.6	**Travel Cost** (only for project activities)		TA/DA for faculty related to project activities	50,000.00	TA/DA for faculty related to project activities	50,000.00	TA/DA for faculty related to project activities	40,000	140,000.00
	1.1.3.7	**Salary** (for TEQIP office staff)		Salary (for TEQIP office staff)	140,000.00	Salary (for TEQIP office staff)	140,000.00	Salary (for TEQIP office staff)	140,000.00	420,000.00
TOTAL					6,950,000.00		5,580,000.00		2,230,000.00	14,760,000.00

Annexure 6.1 a

Sr. No.	Name	Contact No.	Email Address	University Registration No.	Current Semester	Branch	CGPA/percentage till last semester	Any present backlog	Do you have any of the following?	Internet Connectivity available at your place?	FINAL COURSE
1	Abhay Kumar Jaiswal	9931170941	jaiswal845101@gmail.com	18102107001	4th Sem	Mechanical Engineering	8.23	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
2	ABHIJEET KUMAR	8709592910	abhijeetcivil27@gmail.com	18101107910	6th Sem	Civil Engineering	8.67	No	Laptop	Yes	staadpro (Applicable for - 6th sem. CE)
3	Abhijeet Kumar	6299167387	abhijeetchhotu2001@gmail.com	19101159009	2nd Sem	Civil Engineering	3.71	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
4	Abhimanyu kumar	9102034511	abhimanyu9572308928@gmail.com	17102107014	6th Sem	Mechanical Engineering	7.9	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
5	ABHINAV	8638491996	abhinavanandlali@gmail.com	18102107055	4th Sem	Mechanical Engineering	7.85	No	Mobile, Desktop	Yes	CATIA (Applicable for- 4th & 6th sem.–
6	Abhishek Kumar	8863892301	abhishek.muz17@gmail.com	18101107014	4th Sem	Civil Engineering	7.89	No	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
7	Abhishek Kumar	8578821137	abhishekgupta0003.in@gmail.com	18101107013	4th Sem	Civil Engineering	8.21	Yes	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
8	Abhishek Kumar	6201153360	abhishekkumar801104@gmail.com	18106107003	4th Sem	IT	8.2	No	Laptop, Mobile	Yes	Machine Learning (Applicable for - 6th
9	Abhishek kumar	7979014617	xabhi.kr341@gmail.com	17107107009	6th Sem	Leather Engineering	7.89	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
10	Abhishek Kumar	8102870326	akpabhi01@gmail.com	18106107005	4th Sem	IT	7.81	No	Laptop, Mobile	Yes	Android (with Core Java) (Applicable
11	ABHISHEK RANA	9304656771	abhishekrana1702@gmail.com	17104107022	6th Sem	ECE	7.5	No	Laptop	Yes	Python (Applicable for- 2nd, 4th & 6th
12	Abhishek Singh	9631979273	as7714935@gmail.com	19103107044	2nd Sem	Electrical Engineering	7.76	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
13	Adarsh Ranjan	7979990212	adarshranjan4141@gmail.com	19106107002	2nd Sem	IT	8	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
14	Aditya Raj	6205347685	adityarajnvs304@gmail.com	18102107006	4th Sem	Mechanical Engineering	5.67	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
15	Aditya Raj	6299960739	ar056713@gmail.com	19103159039	2nd Sem	Electrical Engineering	4.75	Yes	Laptop, Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
16	Ajay Kumar	7979966265	ajaykrr658@gmail.com	17102107043	6th Sem	Mechanical Engineering	8.15	Yes	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
17	AJIT KUMAR	7488096849	ajitkmr505@gmail.com	17102107026	6th Sem	Mechanical Engineering	8.31	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
18	Akash deep	9430588313	akashdeephjp6@gmail.com	17104107013	6th Sem	ECE	8.92	No	Laptop	Yes	Programming with C and C++ (Applicable
19	AKASH RAJ	9471498581	akashraj280@gmail.com	18104107027	4th Sem	ECE	7.78	No	Laptop, Mobile	Yes	Full stack Web Development
20	Akriti	8873598871	akritiraj700@gmail.com	19101159004	2nd Sem	Civil Engineering	8.03	No	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
21	Alka	6205364845	alkab987@gmail.com	19106107004	2nd Sem	IT	7.09	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
22	Alok kumar	9470712760	Alokmishra438@gmail.com	17106107009	6th Sem	IT	7.43	Yes	Laptop, Mobile	Yes	Machine Learning (Applicable for - 6th
23	Amar kumar mallick	9102149321	kumaramar2674@gmail.com	19101128036	2nd Sem	Civil Engineering	6.91	No	Mobile	Yes	Revit Architecture (Applicable for- 2nd
24	Amarjeet Kumar	6202163728	amarjeetkr23034@gmail.com	19101107036	2nd Sem	Civil Engineering	7.8	No	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
25	Amit Kumar	7765834029	amit.ishu23@gmail.com	18104107001	4th Sem	ECE	7.82	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
26	Amrit Kumar	8619774500	amritkumarroy9@gmail.com	19101107037	2nd Sem	Civil Engineering	5.71	Yes	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
27	Anamika kishor	8102151175	anamikakishor10@gmail.com	19103159019	2nd Sem	Electrical Engineering	6	No	Mobile	Yes	Cyber Security (with basics of Networking
28	Anand kumar	9693086512	ak404248@gmail.com	19104107904	4th Sem	ECE	6	No	Mobile	Yes	Full stack Web Development
29	Anchal kumari	9123159313	anchalsurbhi12@gmail.com	19103107050	2nd Sem	Electrical Engineering	8.83	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
30	Aniket Kumar	8210246703	aniketraj098@gmail.com	19106107010	2nd Sem	IT	5.6	Yes	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
31	Aniket Kumar Sinha	8936872110	aniket13041990@gmail.com	18106107004	4th Sem	IT	8.81	No	Laptop, Mobile	Yes	Full stack Web Development
32	Anilesh Kumar	8789847158	anileshk211@gmail.com	18102107908	6th Sem	Mechanical Engineering	8.06	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
33	Anisha Kumari	6206671620	anisha4pcckraj@gmail.com	18104107016	4th Sem	ECE	6.85	Yes	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
34	ANJALI GUPTA	9523257507	anjaligupta0207@gmail.com	17102107035	6th Sem	Mechanical Engineering	8.56	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
35	Anjali priya	6207899707	anjali1508priya@gmail.com	18106107009	4th Sem	IT	8.67	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
36	ANKIT kumar	7549543499	ankitcivil3131998@gmail.com	16101107015	8th Sem	Civil Engineering	7.56	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
37	Ankush kumar	6204330730	ankushkumar31099@gmail.com	18102107008	4th Sem	Mechanical Engineering	8.8	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
38	Anmol Shrivastava	7004755132	shrivastava199722@gmail.com	16104107012	6th Sem	ECE	6	Yes	Laptop, Mobile, Desktop	Yes	MATLAB (Applicable for - 4th & 6th sem.–
39	Anshu Mala kumari	6209471516	anshu.poddar0706@gmail.com	19101159035	2nd Sem	Civil Engineering	6.26	Yes	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
40	Anurag Anand	8340302494	pk365365@gmail.com	18102107007	4th Sem	Mechanical Engineering	8.93	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
41	Anurag Gupta	8083226656	yours148@gmail.com	17106107016	6th Sem	IT	6.9	Yes	Laptop, Mobile, Desktop	Yes	Ansys (Applicable for- 6th sem. ME)
42	Aparna Rani	6207053303	shonasen6@gmail.com	17104107016	6th Sem	ECE	8.65	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
43	Aparna Rani	6207053303	shonasen6@gmail.com	17104107016	6th Sem	ECE	8.65	Yes	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
44	Arun Kumar Singh	8271400951	arundbg314@gmail.com	17101107019	6th Sem	Civil Engineering	8	No	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
45	Arya	9570983678	aryaroy2017@gmail.com	19101159007	2nd Sem	Civil Engineering	7.6	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
46	Aryan prabhat	8210784183	aryanprabhat017@gmail.com	18101107901	6th Sem	Civil Engineering	8.47	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–

47	Asadullah	9801017271	galibasadullah480@gmail.com	19104107019	2nd Sem	ECE	6.54	Yes	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
48	ASHISH KUMAR SINGH	9507324102	ashishiitb22@gmail.com	17104107065	6th Sem	ECE	6.8	No	Laptop, Mobile, Desktop	Yes	Ansys (Applicable for- 6th sem. ME)
49	Ashish Raj	9572309848	rajashish832@gmail.com	19101059001	2nd Sem	Civil Engineering	6.2	No	Laptop	Yes	Revit Architecture (Applicable for- 2nd
50	Ashmita Kumari	9060012919	ashmitasinha2211@gmail.com	17104107011	6th Sem	ECE	8.13	No	Laptop, Mobile	Yes	Full stack Web Development
51	Ashutosh Kumar	9709228818	kumarashutoah12134@gmail.com	19101107901	4th Sem	Civil Engineering	7.1	Yes	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
52	ASHUTOSH KUMAR	6203821621	piyushtarhari@gmail.com	18102107009	4th Sem	Mechanical Engineering	7.91	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
53	Ashutosh Ranjan	6299701745	ar01012000@gmail.com	18102107056	4th Sem	Mechanical Engineering	8.54	No	Laptop, Mobile, Desktop	Yes	CATIA (Applicable for- 4th & 6th sem.–
54	Astitva Anand	9113447758	astitvanand74@gmail.com	17104107012	6th Sem	ECE	8.5	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
55	AVINASH KUMAR	9060017349	kumaravinash202000@gmail.com	18101107025	4th Sem	Civil Engineering	8.3	No	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
56	AVINASH KUMAR	6206618693	avinashkr843@gmail.com	18102107010	4th Sem	Mechanical Engineering	7.18	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
57	AVINASH KUMAR	9835790435	avinashkumar9199699342@gmail.com	17102107019	6th Sem	Mechanical Engineering	8	Yes	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
58	Ayush Kumar	8434449876	mailayushanytime@gmail.com	17102107004	6th Sem	Mechanical Engineering	8.34	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
59	Ayushi Divya	7519334599	ayushidivya1999@gmail.com	17102107038	6th Sem	Mechanical Engineering	8.02	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
60	Bablu Kumar	6203227176	bablukmr26@gmail.com	18102107011	4th Sem	Mechanical Engineering	7.7	No	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
61	BANTY KUMAR	9334842700	thearjun2110@gmail.com	17104107034	6th Sem	ECE	7.5	No	Laptop, Mobile	Yes	Advance Excel and data Visualisation
62	Bhagwat Mishra	8875300713	bhagwatmishra490@gmail.com	19101107027	2nd Sem	Civil Engineering	8	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
63	Bipul Kumar	6200986816	biyu.mishra98@gmail.com	17104107021	6th Sem	ECE	8.6	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
64	BIRENDRA KUMAR PANDIT	6207796221	bpandit161@gmail.com	17102107032	6th Sem	Mechanical Engineering	7.5	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
65	Bittu Kumar	7023755109	bittuvishwas108@gmail.com	17104107036	6th Sem	ECE	8.23	No	Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
66	Brajesh kumar	9546115400	brajeshmth15@gmail.com	17104107007	6th Sem	ECE	4.8	Yes	Mobile	Yes	Cyber Security (with basics of Networking
67	Chanda Kumari	8252604050	chandakumarimuz45@gmail.com	19101159022	2nd Sem	Civil Engineering	4.1	Yes	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
68	CHANDRAMANI KUMAR	8294726012	chandramanikr.s6@gmail.com	17101107053	6th Sem	Civil Engineering	8.21	No	Mobile	Yes	Staad Pro (Applicable for - 6th
69	Deepak kumar	6200006427	deepakk82640@gmail.com	17101107038	6th Sem	Civil Engineering	8.6	No	Mobile	Yes	Staad Pro (Applicable for - 6th
70	DEEPAK KUMAR	8539882259	deepak.diwakar8539@gmail.com	18102107909	6th Sem	Mechanical Engineering	8.15	Yes	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
71	Dheeraj Kumar	8298659473	dheeraj.focus2015@gmail.com	17102107017	6th Sem	Mechanical Engineering	8.25	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
72	Dhiraj kumar	8873535831	dhirajsharma884417@gmail.com	18104107018	4th Sem	ECE	7.51	No	Laptop, Mobile	Yes	Cyber Security (with basics of Networking
73	Dhiraj Kumar	9708792680	dhirajkumar55410dh@gmail.com	17102107037	6th Sem	Mechanical Engineering	6.5	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
74	Dhiraj Kumar singh	7004334889	Dhiraj9570151721@gmail.com	19102107901	4th Sem	Mechanical Engineering	7.04	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
75	Esha Nandini	9304876799	esha.nandini24@gmail.com	17106107020	6th Sem	IT	8.21	No	Laptop, Mobile	Yes	Full stack Web Development
76	Farheen Alia	7488795500	farheenalia58@gmail.com	17109107002	6th Sem	B. Pharm	7.8	No	Mobile	Yes	Advance Excel and data Visualisation
77	Ganesh Kumar Sah	8709501794	gksah8541@gmail.com	18102107017	4th Sem	Mechanical Engineering	6.67	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
78	Gaurav Kumar	7250319466	togauravkr@gmail.com	19106107014	2nd Sem	IT	6.46	No	Laptop, Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
79	Gaurav kumar	9113143536	gaurav.098muz@gmail.com	17104107023	6th Sem	ECE	8.2	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
80	GAURAV KUMAR	8873062853	topgaurav@gmail.com	17102107022	6th Sem	Mechanical Engineering	7.2	Yes	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
81	Gaurav Pandey	7654364668	pandeygaurav452@gmail.com	17101107002	6th Sem	Civil Engineering	8.17	No	Mobile	Yes	Staad Pro (Applicable for - 6th
82	GOLDEN Kumar	7050646580	goldenkumar11797@gmail.com	16101107049	8th Sem	Civil Engineering	8.15	No	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
83	Gulfishan Sharafat	8210885807	gs8210885807@gmail.com	17104107015	6th Sem	ECE	8.43	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
84	Harsh Anand	8409111676	hanand557@gmail.com	18103107017	4th Sem	Electrical Engineering	7.77	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
85	Harsh Raj	8292439308	harshrajmonu12345@gmail.com	17102107054	6th Sem	Mechanical Engineering	8.8	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
86	HARSH RANJAN	6207600722	harsh123.6206022774@gmail.com	18101107062	4th Sem	Civil Engineering	7.6	No	Laptop, Mobile, I Pad, Desktop	Yes	Programming with C and C++ (Applicable
87	HEMA KUMARI	6206431213	hemakumari90065@gmail.com	18104107013	4th Sem	ECE	8.5	No	Laptop, Mobile	Yes	Cyber Security (with basics of Networking
88	Himanshu Kumar	8210604279	kumarsumitsagar4@gmail.com	17102107002	6th Sem	Mechanical Engineering	8.18	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
89	Himanshu Kumar	7033037896	himanahu2k17mit@gmail.com	17102107001	6th Sem	Mechanical Engineering	8.15	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
90	Hridayesh Tejas Jha	6201898275	hridayeshtejas@gmail.com	17102107013	6th Sem	Mechanical Engineering	8.26	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
91	Hrishita Jha	7544086486	hrishita1510@gmail.com	19106107017	2nd Sem	IT	7.14	No	Mobile, Desktop	Yes	Programming with C and C++ (Applicable
92	Iffat Naaz	6203201657	iffatnaaz2k17@gmail.com	17106107023	6th Sem	IT	7.94	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
93	Jyoti kumari	6206416575	jaiswaljyoti2000@gmail.com	18106107002	4th Sem	IT	9.07	No	Laptop, Mobile	Yes	Cyber Security (with basics of Networking
94	Keshav Kumar	9123263778	keshavkumarben10@gmail.com	17102107007	6th Sem	Mechanical Engineering	8.59	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
95	Khadija	8789208577	h100khadija@gmail.com	19106107903	4th Sem	IT	7.07	Yes	Laptop, Mobile	Yes	Full stack Web Development

96	Kishan Raj	7979016992	kishanraj071198@gmail.com	17102107039	6th Sem	Mechanical Engineering	8.08	No	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
97	Komal kumari	6204409301	komal61kumari@gmail.com	19109107024	2nd Sem	B. Pharm	8.33	No	Mobile	Yes	Programming with C and C++ (Applicable
98	Komal Rani	9508074078	aradhyakomal20@gmail.com	19106107016	2nd Sem	IT	6.54	No	Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
99	Krishna kumar	8294823038	krishna88017@gmail.com	18101107030	4th Sem	Civil Engineering	8	No	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
100	Kundan Kumar	9113407064	kundankumar11121998@gmail.com	17101107033	6th Sem	Civil Engineering	7.47	No	Laptop, Mobile	Yes	staadpro (Applicable for - 6th sem. CE)
101	Kundan Kumar	8877638206	kkundan1206@gmail.com	19101159019	2nd Sem	Civil Engineering	5.2	Yes	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
102	Kush Kumar	8210314754	Kushk241@gmail.com	17104107035	6th Sem	ECE	7.79	No	Laptop	Yes	Android (with Core Java) (Applicable
103	Lily kumari	6203343132	lilychoudhary62033@gmail.com	19104107011	2nd Sem	ECE	8.05	No	Mobile, Desktop	Yes	Programming with C and C++ (Applicable
104	Manisha Prakash	8340105565	prakashmanisha1997@gmail.com	17104107027	6th Sem	ECE	8.45	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
105	MANJESH KUMAR	7542056556	manjesh8757@gmail.com	17101107051	6th Sem	Civil Engineering	7.43	No	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
106	Mannu Kumar	7992370630	mktushal27@gmail.com	19101159005	2nd Sem	Civil Engineering	6.49	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
107	MD AFZAL	7294803660	mdafzal35446@gmail.com	16102107061	6th Sem	Mechanical Engineering	7.47	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
108	MD NAUMAN AKHTAR	8292356156	mdnaumanak786@gmail.com	17101107058	6th Sem	Civil Engineering	8.16	No	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
109	Md Shad Alam	8448315375	shadalam150202@gmail.com	19106107020	2nd Sem	IT	7.71	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
110	MD TAHAMMUL NOOR	6204650197	noorali99307@gmail.com	19106107018	2nd Sem	IT	7.09	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
111	MOHAMMAD EHSHANULLAH	7667524301	mdehshanullah2018@gmail.com	17103107028	6th Sem	Electrical Engineering	8.53	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
112	Mohit Kumar	8340638451	mohitkr7765@gmail.com	17101107016	6th Sem	Civil Engineering	7.74	Yes	Mobile	Yes	Staad Pro (Applicable for - 6th
113	Mohit Kumar	7717732796	8964mohitkumar@gmail.com	17101107032	6th Sem	Civil Engineering	6.81	Yes	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
114	Mohit Raj	8409936839	rmohi1998@gmail.com	17102107050	6th Sem	Mechanical Engineering	7.63	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
115	NAND KISHOR BHARTI	9113174502	nkbharti54mit@gmail.com	17102107056	6th Sem	Mechanical Engineering	7.8	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
116	Narendra Kumar kamat	8178793846	narend697@gmail.com	17102107042	6th Sem	Mechanical Engineering	7.46	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
117	NAVED HASAN	7007635833	navedkhan26july@gmail.com	17101107046	6th Sem	Civil Engineering	8.4	No	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
118	Naveen Kumar	9097520891	nmngupt@gmail.com	18101107007	4th Sem	Civil Engineering	7.5	Yes	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
119	Neebha Rani	9693519381	neebharanibgp31@gmail.com	19102107031	2nd Sem	Mechanical Engineering	8.69	No	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
120	Nicky Kumari	6299390125	nickykumari.nki@gmail.com	17101107041	6th Sem	Civil Engineering	7.98	No	Laptop	Yes	Staad Pro (Applicable for - 6th
121	Nidhi Singh	8864059347	nidhisingh040899@gmail.com	17104017018	6th Sem	ECE	8.13	No	Laptop, Mobile, I Pad	Yes	Programming with C and C++ (Applicable
122	Nikhil kumar	8210911018	nikhilkr9525348648@gmail.com	18104107012	4th Sem	ECE	6.9	No	Laptop, Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
123	Nikita	6203422272	nikitariya786@gmail.com	18106107014	4th Sem	IT	8.54	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
124	NIRAJ KUMAR	7479783303	nirajkumarb6@gmail.com	18106107016	4th Sem	IT	7.04	Yes	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
125	Niraj Kumar	6207253115	nirajkumarnirala2507@gmail.com	18104107068	4th Sem	ECE	8.03	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
126	NIRBHAY KUMAR PANDEY	9262929272	nirbhaypandey019@gmail.com	17104107033	4th Sem	ECE	7.5	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
127	Nirbhay Singh	7004191931	nirbhaysinghbe1@gmail.com	19106107902	4th Sem	IT	7.45	No	Laptop, Mobile	Yes	Cyber Security (with basics of Networking
128	Nisha	7561968938	nisha.gwpmuz@gmail.com	18104107902	6th Sem	ECE	8.73	No	Laptop, Mobile, Desktop	Yes	Full stack Web Development
129	NITISH KUMAR	7281829493	nitishsmp2001@gmail.com	19101159025	2nd Sem	Civil Engineering	6.37	No	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
130	NITISH KUMAR JHA	6206272250	nk8873664938@gmail.com	18102107022	4th Sem	Mechanical Engineering	5.5	Yes	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
131	Nitish Shrivastava	7033868374	nitish9t7@gmail.com	17106107008	6th Sem	IT	7.8	No	Laptop, Mobile, Desktop	Yes	Machine Learning (Applicable for - 6th
132	Om Prakash	9135748443	omprakashshady99@gmail.com	18102107021	4th Sem	Mechanical Engineering	7.4	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
133	OMPRAKASH KUMAR SAH	7371045025	omraj7371@gmail.com	19104107016	2nd Sem	ECE	7.6	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
134	Pankaj Kumar	8271590825	pankajkumar851850@gmail.com	17101107901	8th Sem	Civil Engineering	8.52	No	Laptop, Mobile	Yes	staadpro (Applicable for - 6th sem. CE)
135	PAWAN KUMAR	7033516201	pawankumarme1518@gmail.com	18102107902	6th Sem	Mechanical Engineering	7.9	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
136	Piyush Shekhar	8542929567	piyushsk46077@gmail.com	19106107023	2nd Sem	IT	6.7	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
137	Prabhakar pandey	8709397244	pandeyprabhakar456@gmail.com	17102107012	6th Sem	Mechanical Engineering	7.85	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
138	PRADEEP KUMAR	6201855822	pradeep.mitmuzaffarpur@gmail.com	17104107009	6th Sem	ECE	7.96	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
139	Prasad Shivam Birkumar	7033440381	prasadshivam99@gmail.com	18101107036	4th Sem	Civil Engineering	7	Yes	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
140	Prashant kumar	6201069315	prashantkr140498@gmail.com	17102107029	6th Sem	Mechanical Engineering	8.5	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
141	Prateek Kumar	7667973024	prateekkumar1214@gmail.com	19106107024	2nd Sem	IT	7.77	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
142	Preeti kumari	8084444330	mailmepreeti16@gmail.com	16103107025	8th Sem	Electrical Engineering	7.89	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
143	Princce kumar	9097888922	pk3610308@gmail.com	17104107001	6th Sem	ECE	7.5	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
144	PRINCE KUMAR	7739984725	vcsrm.princekr002@gmail.com	17104107025	6th Sem	ECE	8.13	No	Laptop	Yes	MATLAB (Applicable for - 4th & 6th sem.–

145	Prince kumar	7903186184	kmr.princeaarti123@gmail.com	19101159030	2nd Sem	Civil Engineering	5.29	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
146	PRINCE KUMAR	8709618986	prince95849@gmail.com	19106107039	2nd Sem	IT	4.49	Yes	Laptop	Yes	Programming with C and C++ (Applicable
147	Prince Kumar verma	9570071409	princekumarverma409@gmail.com	19101128032	2nd Sem	Civil Engineering	5.14	No	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
148	Prince mani	8949808627	pawanlal64295959@gmail.com	17101107054	6th Sem	Civil Engineering	7.75	No	Laptop	Yes	staadpro (Applicable for - 6th sem. CE)
149	PRINCE RAJ	7004361011	raj004662@gmail.com	18106107906	6th Sem	IT	6.96	Yes	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
150	Pritam kumar	7667932403	pritamkumar2252@gmail.com	18102107025	4th Sem	Mechanical Engineering	7.25	Yes	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
151	Pritam Raj	9973664099	pritam120910@gmail.com	18101107038	4th Sem	Civil Engineering	7.95	No	Mobile	Yes	Revit Architecture (Applicable for- 2nd
152	Priti kumari	7061387435	pritiedx@gmail.com	17102107041	6th Sem	Mechanical Engineering	7.93	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
153	Priya Rana	7485004125	priya17m58@gmail.com	17102107044	6th Sem	Mechanical Engineering	8.02	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
154	Priyam Prakash	7493859233	priyamprakash@gmail.com	18104107006	4th Sem	ECE	7.8	No	Laptop, Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
155	Priyanka kumari	9798586865	Priyankacivil2k19@gamil.com	1.91011E+11	2nd Sem	Civil Engineering	7.5	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
156	Puja Kumari	8789282873	emailpuja98@gmail.com	17104107019	6th Sem	ECE	8.69	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
157	Purnima	9199514617	purnimab064@gmail.com	19106107901	4th Sem	IT	8.5	No	Laptop, Mobile, Desktop	Yes	Full stack Web Development
158	Ragani kumari	9304464822	raggu46@gmail.com	17101107027	6th Sem	Civil Engineering	8.41	No	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
159	Ragani kumari	8824175588	ragani1dbg@gmail.com	19103159078	2nd Sem	Electrical Engineering	6.17	Yes	Laptop, Mobile, Desktop	Yes	Cyber Security (with basics of Networking
160	RAHUL KUMAR	9608669094	rahulkumarph88@gmail.com	18109107902	6th Sem	B. Pharm	7.42	Yes	Mobile	Yes	Programming with C and C++ (Applicable
161	Rahul Kumar	6206676126	rahulkr102014@gamil.com	18101107040	4th Sem	Civil Engineering	8.44	No	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
162	Rahul kumar	9155080585	rahulkrhzp@gmail.com	17102107049	6th Sem	Mechanical Engineering	5.8	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
163	Rahul Kumar	8404984713	rahulkmr29051998@gmail.com	17102107006	6th Sem	Mechanical Engineering	8	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
164	RAHUL KUMAR	7891574785	rahul21aug98@gmail.com	17102107028	6th Sem	Mechanical Engineering	7.6	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
165	Rahul Kumar Sinha	9955577652	sinharahul220@gmail.com	17106107010	6th Sem	IT	6.71	Yes	Laptop, Mobile, Desktop	Yes	Full stack Web Development
166	RAJ KUMAR	9523001881	mechraj1997@gmail.com	17102107063	6th Sem	Mechanical Engineering	7.37	No	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
167	Raja Babu	8252042705	imrajastark@gmail.com	19106107025	2nd Sem	IT	8.67	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
168	Rajanish Kumar Sharma	7763022552	sharma151298@gmail.com	17102107040	6th Sem	Mechanical Engineering	6.61	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
169	RAJESH DAS	9304655140	rajeshkumarmit93046@gmail.com	17104107003	6th Sem	ECE	7.39	No	Mobile	Yes	Advance Excel and data Visualisation
170	Rajranjan Kumar	7277314356	rajranjankumar1999@gmail.com	17101107017	6th Sem	Civil Engineering	8.11	No	Laptop	Yes	Staad Pro (Applicable for - 6th
171	Raju Kumar	7667568756	kumarraju1242000@gmail.com	18101107043	4th Sem	Civil Engineering	8.01	No	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
172	Ramakar thakur	8084541786	ramakarthakur57@gmail.com	18102107034	4th Sem	Mechanical Engineering	8.6	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
173	Raman Mahto Anand	8294086761	ramanmemit@gmail.com	17102107034	6th Sem	Mechanical Engineering	7.68	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
174	Ranjan sah	6203402519	ranjansah179@gmail.com	17101107030	6th Sem	Civil Engineering	8.1	No	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
175	RAUSHAN KUMAR	7903305423	rkbegusarai4@gmail.com	16101107027	8th Sem	Civil Engineering	8.24	No	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
176	Raushan kumar	9693220645	r8541061699@gmail.com	19106107041	2nd Sem	IT	7.23	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
177	RAUSHAN KUMAR	7050146293	erraushankumar99@gmail.com	17102107045	6th Sem	Mechanical Engineering	7.752	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
178	Ravi Jyoti	7546904236	ravijyoti1908@gmail.com	19103107019	2nd Sem	Electrical Engineering	6.17	Yes	Mobile	Yes	Programming with C and C++ (Applicable
179	Ravi Kumar	7765969086	rkms393@gmail.com	18106107033	4th Sem	IT	8.89	No	Laptop, Mobile	Yes	Advance Excel and data Visualisation
180	Ravi kumar	6201424925	ravikumarkhadiha62012@gmail.com	19102107064	2nd Sem	Mechanical Engineering	7.31	No	Laptop, Mobile, I Pad, Desktop	Yes	Programming with C and C++ (Applicable
181	Ravi Kumar Singh	8986259278	rs18982781@gmail.com	17104107002	6th Sem	ECE	8.4	No	Laptop	Yes	Android (with Core Java) (Applicable
182	RAVI SHANKAR	7635025287	ravishankar800008@gmail.com	19106107026	2nd Sem	IT	7.77	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
183	RAVISH KUMAR	7004669984	ravishkumar8229@gmail.com	19102107902	4th Sem	Mechanical Engineering	7.12	No	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
184	Remee singh	6202097794	remeesingh700@gmail.com	19101159039	2nd Sem	Civil Engineering	7.29	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
185	Risabh Kumar	9155229057	risabh0407@gmail.com	16101107004	8th Sem	Civil Engineering	8.54	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
186	Rishabh Kumar Singh	7004055243	rishabh.qwertyuio@gmail.com	19106107028	2nd Sem	IT	8.14	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
187	RISHAV ANAND	7739724087	rishavanand98765@gmail.com	19106107027	2nd Sem	IT	6.5	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
188	Rishi kumar	8969428206	rishichoudhary778@gmail.com	19104107035	2nd Sem	ECE	7.42	No	Mobile	Yes	Machine Learning (Applicable for - 6th
189	Ritesh Kumar	6200461173	rk3174864@gmail.com	17106107013	6th Sem	IT	6.75	Yes	Laptop, Mobile	Yes	Machine Learning (Applicable for - 6th
190	Ritesh prasad	7004563119	riteshprasad25198@gmail.com	18102107906	6th Sem	Mechanical Engineering	7.99	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
191	Ritika	9102439969	ritikakumari08461@gmail.com	18101107045	4th Sem	Civil Engineering	8.54	No	Mobile	Yes	Revit Architecture (Applicable for- 2nd
192	Ritish Kumar	6200308304	ritishkumar735@gmail.com	17102107058	6th Sem	Mechanical Engineering	8.59	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
193	Riya Agrawal	9123204512	drriyaagrawal1998@gmail.com	17106107001	6th Sem	IT	8.04	Yes	Laptop, Mobile	Yes	Full stack Web Development

194	Rohit Kumar	8674935586	rohitkumar08640@gmail.com	17104107041	4th Sem	ECE	7.89	No	Laptop, Mobile	Yes	Machine Learning (Applicable for - 6th
195	Rohit Kumar	8674935586	rohit.mitian@gmail.com	17104107041	4th Sem	ECE	7.89	No	Laptop, Mobile	Yes	Cyber Security (with basics of Networking
196	Rohit Kumar	9262255030	rohitkumarmechanical19@gmail.com	19102107050	2nd Sem	Mechanical Engineering	8.02	No	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
197	ROHIT RANJAN	8797183089	rohitranjan5618@gmail.com	17102107048	6th Sem	Mechanical Engineering	7.85	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
198	Ronit Kumar	8271441431	ronitkumarsharma1999@gmail.com	19101159041	2nd Sem	Civil Engineering	4.91	Yes	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
199	Ronit Kumar	8271441431	ronitsharma851118@gmail.com	19101159041	2nd Sem	Civil Engineering	4.71	Yes	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
200	RUPESH KUMAR	9135400859	rupesh91354@gmail.com	19102128021	2nd Sem	Mechanical Engineering	5.36	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable
201	Rupesh Sharma	7903427194	rupeshraj3537@gmail.com	19102128004	2nd Sem	Mechanical Engineering	7.6	No	Laptop	Yes	Programming with C and C++ (Applicable
202	Sachin kumar	7979727799	sachinkumar80921@gmail.com	17104107006	6th Sem	ECE	7.92	No	Laptop, Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
203	Sachin Kumar	9521398157	sachin3889.skiit@gmail.com	18106107023	4th Sem	IT	7.89	No	Laptop, Mobile	Yes	Android (with Core Java) (Applicable
204	Sahil Kumar	9504047429	ksahilkumar001@gmail.com	19101107058	2nd Sem	Civil Engineering	8.71	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
205	Santosh Kumar	8521258368	sant17m37@gmail.com	17102107025	6th Sem	Mechanical Engineering	8.51	No	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
206	Santosh Kumar	8406950710	mastersantoshdixit@gmail.com	19103159094	2nd Sem	Electrical Engineering	6.6	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
207	Santosh Kumar Giri	7074861365	santoshraj.nic@gmail.com	19104107906	4th Sem	ECE	7.08	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
208	Satish Kumar	6299180195	satish.kr342@gmail.com	17102107016	6th Sem	Mechanical Engineering	7.89	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
209	Saummya Singh	9128682218	saumya.s0206@gmail.com	18104107025	4th Sem	ECE	8.04	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
210	saurabh kumar	7717723109	s7549467522@gmail.com	16101107006	8th Sem	Civil Engineering	8.2	No	Laptop	Yes	Revit Architecture (Applicable for- 2nd
211	SAURABH KUMAR	9155937354	saurabh30062001@hotmail.com	1201518002	4th Sem	Civil Engineering	7.9	Yes	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
212	Saurabh Kumar Vigyananand	7322098817	saurabhvigyananand@gmail.com	19106107904	4th Sem	IT	7	No	Laptop, Mobile	Yes	Full stack Web Development
213	Saurav kumar	7549530037	sauravkumar652@gmail.com	17102107047	6th Sem	Mechanical Engineering	7.56	Yes	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
214	Saurav kumar	6200299172	mailmesauravkumar161298@gmail.com	17102107024	6th Sem	Mechanical Engineering	7.5	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
215	Shadab Ali	9523620937	shadabali34772@gmail.com	18102107038	4th Sem	Mechanical Engineering	7.8	No	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
216	Shalini Saurav	9205316378	shalinisaurav999@gmail.com	18104107036	4th Sem	ECE	7.27	No	Mobile	Yes	MATLAB (Applicable for - 4th & 6th sem.–
217	Shashi ranjan	6200616508	shashiranjan9854@gmail.com	17101107044	6th Sem	Civil Engineering	7.6	Yes	Mobile	Yes	Staad Pro (Applicable for - 6th
218	Shatrunjay kumar	8227068935	shatrunjaykumar69@gmail.com	17102107052	6th Sem	Mechanical Engineering	7.5	Yes	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
219	Shivam Kumar singh	8409971007	sksingh7701@gmail.com	19104107027	2nd Sem	ECE	7.56	No	Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
220	Shivam Raj	8102736668	shivamrajput810273@gmail.com	1.81101E+11	4th Sem	Electrical Engineering	6.29	Yes	Laptop	Yes	MATLAB (Applicable for - 4th & 6th sem.–
221	Shivam sagar	9304892443	shivammit.mfp@gmail.com	17102107033	6th Sem	Mechanical Engineering	7.76	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
222	shivam sagar	9304892443	shivammit.mfp@gmail.com	17102107033	6th Sem	Mechanical Engineering	7.76	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
223	Shreya Swaraj	7903894460	sonalilove231999@gmail.com	17104107028	6th Sem	ECE	8.35	No	Laptop, Mobile	Yes	Full stack Web Development
224	Shristi Singh	8210448220	shristisingh384@gmail.com	18106107025	4th Sem	IT	8.91	No	Laptop, Mobile	Yes	Android (with Core Java) (Applicable
225	Shubham Kumar	8102586540	shubhamsinghanya05@gmail.com	19101107051	2nd Sem	Civil Engineering	8.34	No	Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
226	Shubham Kumar	9504288298	kumar.shubham.singh99@gmail.com	19107107007	2nd Sem	Leather Engineering	7.9	No	Laptop, Mobile, Desktop	Yes	Java (Applicable for- 2nd and 4th sem. -
227	Shubham Kumar	9304660823	shubham2603kumar@gmail.com	17106107017	6th Sem	IT	7.56	No	Laptop, Mobile	Yes	Advance Excel and data Visualisation
228	Shubham kumar	7480035577	shubhamsingh11062002@gmail.com	19104107043	2nd Sem	ECE	3.51	No	Laptop	Yes	Java (Applicable for- 2nd and 4th sem. -
229	SHUBHAM KUMAR	7319884578	subhamkumar2510@gmail.com	17106107029	6th Sem	IT	6.85	Yes	Laptop	Yes	Machine Learning (Applicable for - 6th
230	Shubham Kumar	7004593879	idforshubham@gmail.com	17102107036	6th Sem	Mechanical Engineering	6.78	Yes	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
231	Shubham raj	7665842734	shubh04tm@gmail.com	19106107033	2nd Sem	IT	7.2	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
232	Shubham Sharma	9939813612	shubham14oct2000@gmail.com	18104107032	4th Sem	ECE	7.21	No	Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
233	Shubhangi Shreya	8544253007	shubhangishreya11119@gmail.com	18106107029	4th Sem	IT	9.13	No	Laptop, Mobile	Yes	Android (with Core Java) (Applicable
234	Shudhanshu Roy	7321022692	shudhanshuroy219@gmail.com	17101107001	6th Sem	Civil Engineering	7.99	No	Laptop, Mobile	Yes	Staad Pro (Applicable for - 6th
235	Shweta Kashyap	7541977745	shwetakashyap1109@gmail.com	18101107051	4th Sem	Civil Engineering	8.82	No	Laptop	Yes	Revit Architecture (Applicable for- 2nd
236	SONAM KUMARI	6206477181	sonamgwp1998@gmail.com	18104107901	6th Sem	ECE	8.69	No	Laptop, Mobile	Yes	Full stack Web Development
237	Soni Kumari	9833697538	sonijaiswal.mum@gmail.com	2345	6th Sem	Electrical Engineering	8	No	Laptop, Mobile	Yes	Full stack Web Development
238	subhash Kumar	8292085494	subhash8292kumar@gmail.com	18102107041	4th Sem	Mechanical Engineering	7.8	Yes	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
239	subhash Kumar	8292085495	subhashmitm7272@gmail.com	18102107041	4th Sem	Mechanical Engineering	7.68	Yes	Laptop, Mobile	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
240	SUBHASH KUMAR	9523403938	2000kumar.subhash@gmail.com	18102107901	6th Sem	Mechanical Engineering	8.41	No	Laptop, Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
241	SUDHANSHU RANJAN	8340752485	sudhanshu6ranjan@gmail.com	17102107003	6th Sem	Mechanical Engineering	8.23	No	Laptop	Yes	Ansys (Applicable for- 6th sem. ME)
242	Sudhanshu Shekhar Mishra	9931352907	sudhanshu18701@gmail.com	19106107035	2nd Sem	IT	8.43	No	Laptop, Mobile	Yes	Programming with C and C++ (Applicable

243	SUMANT RAJ	9852333675	sumantrajbedaulia@gmail.com	19104107905	4th Sem	ECE	7.77	No	Mobile	Yes	Advance Excel and data Visualisation
244	sumeet kumar	8825132844	sk9255302@gmail.com	18102107043	4th Sem	Mechanical Engineering	7.88	No	Laptop	Yes	CATIA (Applicable for- 4th & 6th sem.–
245	Sumeet Ranjan	6205648358	sumeetranjan2k1@gmail.com	18102107044	4th Sem	Mechanical Engineering	7.3	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
246	Sumit Kumar	8908817528	sumit4kr@gmail.com	19102107053	4th Sem	Mechanical Engineering	5.6	Yes	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
247	Sumit Kumar	7050606371	sumitsrivastava922@gmail.com	18102107045	4th Sem	Mechanical Engineering	8.9	No	Laptop, Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
248	SUNIL PUSHPAM	6200045869	sunilpushpam963@gmail.com	17102107060	6th Sem	Mechanical Engineering	7.22	No	Laptop	Yes	AutoCAD (Applicable for- 2nd & 4th sem.–
249	Sunny Saurav	7717758489	sunnysaurav7713@gmail.com	17104107020	6th Sem	ECE	8.63	No	Mobile	Yes	Programming with C and C++ (Applicable
250	Supriya Bharti	7061785100	supriyabhartibst1999@gmail.com	17104107017	6th Sem	ECE	8.47	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
251	Suraj Kumar	7488486060	surajkrmfp12@gmail.com	17104107037	6th Sem	ECE	7.5	No	Laptop, Mobile	Yes	Cyber Security (with basics of Networking
252	Surbhi kumari	8340634269	surbhikhg91@gmail.com	17106107028	6th Sem	IT	7.72	Yes	Laptop, Mobile	Yes	Machine Learning (Applicable for - 6th
253	Sushmita	7667166847	rkshukhla5576@gmail.com	18106107028	4th Sem	IT	8.56	No	Laptop	Yes	Python (Applicable for- 2nd, 4th & 6th
254	Swati kumari	8434049955	swatiku000055gamil.com@gmail.com	18104107034	4th Sem	ECE	7.3	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
255	Swati Singh	6204584205	swatisinghbgp11@gmail.com	19104107032	2nd Sem	ECE	8.54	No	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
256	Tamanna Choudhary	9155510495	tamannachoudhary919@gmail.com	17103107047	6th Sem	Electrical Engineering	8.33	No	Mobile	Yes	Advance Excel and data Visualisation
257	Tanuja Bharti	9473316240	rnhstanuja53009@gmail.com	19107107002	2nd Sem	Leather Engineering	5.2	Yes	Mobile	Yes	Programming with C and C++ (Applicable
258	TEJ PRATAP	9508536118	tejpratap053@gmail.com	18102107049	4th Sem	Mechanical Engineering	8.3	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
259	UDAY KUMAR	7079923203	udaykumar1171999@gmil.com	18105128029	4th Sem	IT	7	Yes	Laptop, Mobile	Yes	Python (Applicable for- 2nd, 4th & 6th
260	Utkarsh	9631464544	utkarsh.raj.16718@gmail.com	19106107034	2nd Sem	IT	6	No	Laptop, Mobile	Yes	Java (Applicable for- 2nd and 4th sem. -
261	Utkarsh kumar	8757194807	2016krutkarsh@gmail.com	19106107036	2nd Sem	IT	7.1	No	Laptop, Mobile, I Pad	Yes	Python (Applicable for- 2nd, 4th & 6th
262	Vandana Preyasi	8340329926	ruchi93343@gmail.com	19104107903	4th Sem	ECE	7.7	No	Mobile	Yes	Advance Excel and data Visualisation
263	Veer kumar	7870055449	veer7870055@gmail.com	17102107031	6th Sem	Mechanical Engineering	7.95	No	Mobile	Yes	Ansys (Applicable for- 6th sem. ME)
264	Vikas Kumar	6209848131	vikasfacer9973@gmail.com	191011042	2nd Sem	Civil Engineering	8.7	No	Laptop	Yes	Revit Architecture (Applicable for- 2nd
265	Vikash kumar kamat	9128984108	vikashkumarvikash9939@gmail.com	19101159049	2nd Sem	Civil Engineering	4	Yes	Laptop, Mobile, Desktop	Yes	Revit Architecture (Applicable for- 2nd
266	VIKET SAURABH	8541993848	viketsaurabh@gmail.com	18102107050	4th Sem	Mechanical Engineering	7.67	No	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–
267	Vishakha Bharti	7667113759	vishakhabharti4@gmail.com	18101107006	4th Sem	Civil Engineering	8.91	No	Laptop, Mobile	Yes	Revit Architecture (Applicable for- 2nd
268	VIVEK KUMAR	95700079937	vivekkumaridea23@gmail.com	19109107002	2nd Sem	B. Pharm	8	No	Mobile	Yes	Programming with C and C++ (Applicable
269	Vivek Kumar Divyansh	6299216376	vivekdivyansh420@gmail.com	18104107031	4th Sem	ECE	7.27	No	None	Yes	Full stack Web Development
270	YASH RANJAN	7479688641	yash8282mit@gmail.com	18101107071	4th Sem	Civil Engineering	7.1	No	Laptop, Mobile, I Pad, Desktop	Yes	Programming with C and C++ (Applicable
271	YASHSHVI KUMAR SINGH	6206641063	yashshvikumarsingh@gmail.com	18102107052	4th Sem	Mechanical Engineering	6.66	Yes	Mobile	Yes	CATIA (Applicable for- 4th & 6th sem.–

Annexure 6.1 b

Sl. No.	Username	Name	rrent Seme	Branch	entage till l	Course Interested (Priority 1
1	vinaybajaj1994@g	Vinay Kumar	2nd Sem	B. Pharm	5.3	(Applicable for all students o
2	manjeetkumarsah4	Manjeet Kumar Sah	4th Sem	B. Pharm	7	(Applicable for all students o
3	dr.chandanraaz07@	Chandan Kumar	2nd Sem	B. Pharm	5.74	(Applicable for all students o
4	alamgira168@gma	Alamgir Alam	4th Sem	B. Pharm	6.52	licable for - 4th & 6th sem.â€
5	krshubhash07491@	Subhash Kumar	6th Sem	B. Pharm	7.6	(Applicable for all students o
6	vk8540@gmail.co	Vivek Kumar	2nd Sem	B. Pharm	7.59	for- 2nd and 4th sem. - CSE/I
7	aakritisingh3200@	Akriti Singh	6th Sem	il Engineer	8.14	ecture (Applicable for- 2nd &
8	vishnukrmandal19	Vishnu kumar mandal	2nd Sem	il Engineer	7.34	Applicable for- 2nd & 4th sem.
9	kumarswetank.mfp	Shwetank kumar	4th Sem	il Engineer	7.33	Applicable for- 2nd & 4th sem.
10	rupakkumar404@g	Rupak kumar	6th Sem	il Engineer	7	l Pro (Applicable for - 6th sem
11	raj.rpesh@gmail.c	Rupesh raj	2nd Sem	il Engineer	4.86	Applicable for- 2nd & 4th sem.
12	nitish742001@gm	NITISH KUMAR	2nd Sem	il Engineer	8.37	Applicable for- 2nd & 4th sem.
13	prashantkumar251	PRASHANT KUMAR	6th Sem	il Engineer	7.99	l Pro (Applicable for - 6th sem
14	satyamk1108@gm	Satyam kumar	2nd Sem	il Engineer	8.87	Applicable for- 2nd & 4th sem.
15	shubhamprajapatit	Shubham kumar anand	2nd Sem	il Engineer	7.77	Applicable for- 2nd & 4th sem.
16	sk7949936@gmail	SHUBHAM KUMAR	2nd Sem	il Engineer	5.56	Applicable for- 2nd & 4th sem.
17	princekumarkocha	Prince Kumar	4th Sem	il Engineer	7.07	Applicable for- 2nd & 4th sem.
18	nishantranjan1248	Nishant Ranjan	4th Sem	il Engineer	7.46	Applicable for- 2nd & 4th sem.
19	gauravkumar5107	Gaurav Kumar	2nd Sem	il Engineer	7.14	Applicable for- 2nd & 4th sem.
20	gautamaditya582@	Aditya Kumar gautam	4th Sem	il Engineer	7.88	ecture (Applicable for- 2nd &
21	adityasingh004321	Adity Kumar	4th Sem	il Engineer	8.04	ecture (Applicable for- 2nd &
22	vikashsiwan84120	Vikash Kumar	6th Sem	il Engineer	8.6	l Pro (Applicable for - 6th sem
23	shreyasinha8985@	Shreya	4th Sem	il Engineer	8.54	ecture (Applicable for- 2nd &
24	ddivyanshushekha	Divyanshu Shekhar	6th Sem	il Engineer	8.5	l Pro (Applicable for - 6th sem
25	abhilist1@gmail.c	Abhishek Gulshan	2nd Sem	il Engineer	7.5	Applicable for- 2nd & 4th sem.
26	choudharyaman55	Aman Choudhary	2nd Sem	il Engineer	5.18	ecture (Applicable for- 2nd &
27	pankajkumarnwd8	Pankaj Kumar	2nd Sem	il Engineer	6.4	ecture (Applicable for- 2nd &
28	gopalkumar85112	Gopal kumar	2nd Sem	il Engineer	7.71	Applicable for- 2nd & 4th sem.
29	prabhash1998kum	Prabhash kumar	6th Sem	il Engineer	8.29	l Pro (Applicable for - 6th sem
30	mdnasiralam01998	MD NASIR ALAM	4th Sem	il Engineer	7.88	Applicable for- 2nd & 4th sem.
31	natasha17c06@gm	NATASHA	6th Sem	il Engineer	8.13	l Pro (Applicable for - 6th sem
32	saurabhsagar050@	Saurabh	2nd Sem	il Engineer	8.03	Applicable for- 2nd & 4th sem.
33	sonukumar760766	SONU KUMAR	6th Sem	il Engineer	8.6	l Pro (Applicable for - 6th sem

34	mahaseth2016@gr	Manmeet Mahaseth	2nd Sem	vil Engineer	7.91	Applicable for- 2nd & 4th sem.
35	satishpal615@gma	Satish pal	4th Sem	vil Engineer	6.71	Applicable for- 2nd & 4th sem.
36	ds047321@gmail.c	Deepak Kumar Sharma	2nd Sem	vil Engineer	7.07	Applicable for- 2nd & 4th sem.
37	rk2509ssm@gmail	Pawan kumar	2nd Sem	vil Engineer	7.9	Applicable for- 2nd & 4th sem.
38	anish141anand@g	Anish Anand	2nd Sem	vil Engineer	8.37	Applicable for- 2nd & 4th sem.
39	aditya700kumar@	ADITYA KUMAR	6th Sem	vil Engineer	7.76	l Pro (Applicable for - 6th sem
40	sachinkumarcivile	Sachin kumar	2nd Sem	vil Engineer	5.25	or- 2nd, 4th & 6th sem. â€“ C
41	shivamjharoman00	Shivam Jha	6th Sem	vil Engineer	8.56	l Pro (Applicable for - 6th sem
42	vikash.vk649@gm	VIKASH KUMAR	6th Sem	vil Engineer	7.26	l Pro (Applicable for - 6th sem
43	yashwantkumar15	Yashwant kumar	6th Sem	vil Engineer	8.78	l Pro (Applicable for - 6th sem
44	kumarabhishekh33	Abhishek Kumar Paswan	2nd Sem	vil Engineer	7.11	Applicable for- 2nd & 4th sem.
45	vikasgupta9973@g	Vikas Kumar	2nd Sem	vil Engineer	8	Applicable for- 2nd & 4th sem.
46	birukumarp208@g	BIRU KUMAR	6th Sem	vil Engineer	8.54	l Pro (Applicable for - 6th sem
47	harshraj1405@gm	Harsh raj	2nd Sem	vil Engineer	7.23	Applicable for- 2nd & 4th sem.
48	satishraj99310@gr	Satish raj	2nd Sem	vil Engineer	3.37	Applicable for- 2nd & 4th sem.
49	rahk200@gmail.co	Rahul Kumar	6th Sem	vil Engineer	8.18	l Pro (Applicable for - 6th sem
50	lalukumarsmp123(	Laloo Kumar	2nd Sem	vil Engineer	5.34	Applicable for- 2nd & 4th sem.
51	04abhishek02kuma	ABHISHEK KUMAR	2nd Sem	vil Engineer	3.6	Applicable for- 2nd & 4th sem.
52	guptamit365@gma	Vikas	6th Sem	vil Engineer	8.7	l Pro (Applicable for - 6th sem
53	rajeshkumarsharma	RAJESH KUMAR SHARMA	4th Sem	vil Engineer	7.1	Applicable for- 2nd & 4th sem.
54	shashiraj27082000	Shashi Raj	6th Sem	vil Engineer	7.58	l Pro (Applicable for - 6th sem
55	mdasjadhasan@gn	MD ASJAD HASAN	2nd Sem	vil Engineer	7.03	Applicable for- 2nd & 4th sem.
56	KISHANRADHA2	DHANANJAY KUMAR	6th Sem	vil Engineer	7.91	l Pro (Applicable for - 6th sem
57	ak2723476@gmail	Ankit kumar	2nd Sem	vil Engineer	7.23	Applicable for- 2nd & 4th sem.
58	priyankacivil2k19(	Priyanka kumari	2nd Sem	vil Engineer	7.8	Applicable for- 2nd & 4th sem.
59	dilip.may.02@gma	Dilip Kumar	8th Sem	vil Engineer	7.4	l Pro (Applicable for - 6th sem
60	kanhaiyakumarclg2	KANHAIYA KUMAR	2nd Sem	vil Engineer	5	Applicable for- 2nd & 4th sem.
61	shubhambharadwa	Shubham Bharadwaj	6th Sem	vil Engineer	7.84	l Pro (Applicable for - 6th sem
62	roysandhya062@g	Aaradhya Roy	4th Sem	vil Engineer	6.75	ecture (Applicable for- 2nd &
63	aayushnitesh21@g	AAYUSH ANANT	8th Sem	vil Engineer	8.1	Applicable for- 2nd & 4th sem.
64	divyarxl56@gmail	Divya kumari	4th Sem	vil Engineer	8.7	Applicable for- 2nd & 4th sem.
65	abhinandankumar1	abhinandan kumar	2nd Sem	vil Engineer	3.37	Applicable for- 2nd & 4th sem.
66	sauravabhi98@gm	SAURAV ABHISHEK	6th Sem	vil Engineer	7.83	l Pro (Applicable for - 6th sem
67	anjalimadhu710@g	Anjali	2nd Sem	vil Engineer	6.29	Applicable for- 2nd & 4th sem.
68	akr.7023@gmail.c	ALOK RAJ	6th Sem	vil Engineer	7.81	l Pro (Applicable for - 6th sem

69	riteshlal2809@gma	RITESH KUMAR LAL	6th Sem	vil Engineer	8.33	l Pro (Applicable for - 6th sem
70	prashantsinha0820	Prashant Sinha	2nd Sem	vil Engineer	7.94	Applicable for- 2nd & 4th sem.
71	sumitshekhar0099	Sumit shekhar	4th Sem	vil Engineer	8.29	Applicable for- 2nd & 4th sem.
72	rohitkrrajj16@gma	Rohit Raj	4th Sem	vil Engineer	7.13	Applicable for- 2nd & 4th sem.
73	chaudharytushi50@	Tushi kumari	4th Sem	vil Engineer	6.6	ecture (Applicable for- 2nd &
74	sahusarojkumar71	Saroj kumar sahu	2nd Sem	vil Engineer	5.4	Applicable for- 2nd & 4th sem.
75	sandipkr03012000	Sandip Kumar	4th Sem	vil Engineer	8	ecture (Applicable for- 2nd &
76	rahul.8407029950	RAHUL KUMAR MISHRA	8th Sem	vil Engineer	8.15	l Pro (Applicable for - 6th sem
77	balkunar13102000	Bal kunar	2nd Sem	vil Engineer	3.46	(Applicable for all students o
78	mail2vandnayadav	Vandana kumari	4th Sem	vil Engineer	5.95	ecture (Applicable for- 2nd &
79	sonamkumarikv20	Sonam kumari	2nd Sem	vil Engineer	8.66	Applicable for- 2nd & 4th sem.
80	princesrivastava61	Shivam Kumar	4th Sem	vil Engineer	7.77	l Pro (Applicable for - 6th sem
81	ik99348321@gma	Irfan khan	4th Sem	vil Engineer	8.28	l Pro (Applicable for - 6th sem
82	diveshkumar70338	Devesh Kumar goit	4th Sem	vil Engineer	6.81	ecture (Applicable for- 2nd &
83	akym0825@gmail.	AKSHAY KUMAR	4th Sem	vil Engineer	8.2	l Pro (Applicable for - 6th sem
84	rajankhori19990@	Rajan Kumar	4th Sem	vil Engineer	6.2	Applicable for- 2nd & 4th sem.
85	kumariruchika017	Ruchika kumari	4th Sem	vil Engineer	5.64	l Pro (Applicable for - 6th sem
86	officialrahul043@g	Rahul Kumar	2nd Sem	vil Engineer	3.37	Applicable for- 2nd & 4th sem.
87	rockstarranjan200	Anand Kumar	2nd Sem	vil Engineer	4.74	Applicable for- 2nd & 4th sem.
88	kk4641432@gmai	Kriti kumari	2nd Sem	vil Engineer	7.43	(Applicable for all students o
89	lavkush444pali@g	Lavkush kumar	2nd Sem	vil Engineer	3.37	Applicable for- 2nd & 4th sem.
90	kunalsudhanshu45	shivam sudhanshu	4th Sem	vil Engineer	4.61	Applicable for- 2nd & 4th sem.
91	premprakash61107	Prem Prakash	6th Sem	vil Engineer	7.41	l Pro (Applicable for - 6th sem
92	rk5231583@gmail	Rajeev kumar	2nd Sem	vil Engineer	6.46	Applicable for- 2nd & 4th sem.
93	Sah1997012@gma	KAMAL NARAYAN SAH	6th Sem	vil Engineer	6.87	l Pro (Applicable for - 6th sem
94	Pankajkr1822002@	Pankaj kumar	2nd Sem	vil Engineer	2.64	Applicable for- 2nd & 4th sem.
95	gauravkant805129	Gaurav kant kumar	4th Sem	vil Engineer	4.5	Applicable for- 2nd & 4th sem.
96	vikashvk2316@gn	Vikash kumar	4th Sem	vil Engineer	8.44	Applicable for- 2nd & 4th sem.
97	shivamkmr079@g	SHIVAM KUMAR	4th Sem	vil Engineer	7.7	Applicable for- 2nd & 4th sem.
98	amit78700912h@g	amit Kumar	2nd Sem	vil Engineer	7.74	ecture (Applicable for- 2nd &
99	krsingh575@gmai	RAUSHAN KUMAR	2nd Sem	vil Engineer	0	Applicable for- 2nd & 4th sem.
100	anjanikumarimadh	Anjani Kumari	2nd Sem	vil Engineer	3.37	Applicable for- 2nd & 4th sem.
101	manishchaudhary9	MANISH CHAUDHARY	2nd Sem	vil Engineer	7.97	Applicable for- 2nd & 4th sem.
102	furquanali1155@g	MD FURQUAN ALI	6th Sem	vil Engineer	6.7	l Pro (Applicable for - 6th sem
103	engg.sudhirkumar	Sudhir Kumar Yadav	4th Sem	vil Engineer	7.38	(Applicable for all students o

104	nilotpal414@gmai	Nilotpal kumar	4th Sem	il Engineer	7.59	ecture (Applicable for- 2nd &
105	richasahukar22@g	RICHA KUMARI	4th Sem	ECE	8.49	arning (Applicable for - 6th se
106	nk3218761@gmai	Nilesh kumar	4th Sem	ECE	6.89	g & Linux) (Applicable for- 4
107	nikhilkr88089@gn	Nikhil kumar	2nd Sem	ECE	6.88	(Applicable for all students o
108	pragyasinghbg@g	Pragya Singh	2nd Sem	ECE	8.05	or- 2nd, 4th & 6th sem. â€“ C
109	kdeo861@gmail.c	Deo kumar	2nd Sem	ECE	70.2	(Applicable for all students o
110	nirajece18@gmail.	Niraj Kumar Ram	4th Sem	ECE	8.24	(Applicable for all students o
111	erkundankumar20	KUNDAN KUMAR	4th Sem	ECE	3.15	(Applicable for all students o
112	pce4249@gmail.c	Ravi kumar	4th Sem	ECE	8.34	(Applicable for all students o
113	himanshukumardu	Himanshu kumar	4th Sem	ECE	8	(Applicable for- 4th & 6th Se
114	adityaspj001@gma	Aditya Kumar	2nd Sem	ical Engin	5.68	for- 2nd and 4th sem. - CSE/I
115	kundanrluv310@g	Kundan kumar	2nd Sem	ical Engin	6.85	for- 2nd and 4th sem. - CSE/I
116	saksheekumari670	Sakshee Kumari	2nd Sem	ical Engin	5.49	or- 2nd, 4th & 6th sem. â€“ C
117	rajivstm5@gmail.c	Rajiv kumar	2nd Sem	ical Engin	4.2	for- 2nd and 4th sem. - CSE/I
118	anshraj1744@gma	Ansh Raj	2nd Sem	ical Engin	4.56	for- 2nd and 4th sem. - CSE/I
119	suryavicky7294@g	prashant kumar	2nd Sem	ical Engin	5.73	for- 2nd and 4th sem. - CSE/I
120	rahulkrlaxmi@gma	Rahul Kumar	2nd Sem	ical Engin	7.15	or- 2nd, 4th & 6th sem. â€“ C
121	adarsh.divyan7079	Shubham kumar	2nd Sem	ical Engin	3.19	for- 2nd and 4th sem. - CSE/I
122	lalitkumar5399@g	Lalit kumar bhagat	2nd Sem	ical Engin	6.68	(Applicable for all students o
123	ishumuz2001@gm	ISHU RANJAN	2nd Sem	ical Engin	6.34	(Applicable for all students o
124	krkundan1572000	Kundan Kumar	2nd Sem	ical Engin	7	(Applicable for all students o
125	deepakkumar2520	Deepak Kumar	2nd Sem	ical Engin	4.46	or- 2nd, 4th & 6th sem. â€“ C
126	vikeshkrbca@gma	Vikesh Kumar	2nd Sem	ical Engin	7.39	(Applicable for all students o
127	pushpamkumar769	Pushpam kumar	2nd Sem	ical Engin	4.56	or- 2nd, 4th & 6th sem. â€“ C
128	sonupraveen98011	Sonu Praveen	2nd Sem	ical Engin	7.73	(Applicable for all students o
129	contact4niteshkum	Nitesh Kumar	2nd Sem	ical Engin	5.05	for- 2nd and 4th sem. - CSE/I
130	abhakri963@gmai	Abha Kumari	2nd Sem	ical Engin	6.27	or- 2nd, 4th & 6th sem. â€“ C
131	sk794564@gmail.c	shubham kumar	2nd Sem	ical Engin	7.02	or- 2nd, 4th & 6th sem. â€“ C
132	raviklwfs@gmail.c	Ravi Shankar Kumar	2nd Sem	ical Engin	5.6	or- 2nd, 4th & 6th sem. â€“ C
133	78tusharraj.1@gm	Tushar Raj	2nd Sem	ical Engin	5.9	or- 2nd, 4th & 6th sem. â€“ C
134	nitish1242002@gn	Nitish Kumar	2nd Sem	ical Engin	8.39	for- 2nd and 4th sem. - CSE/I
135	anjalikumari94733	Anjali kumari	2nd Sem	ical Engin	7.45	or- 2nd, 4th & 6th sem. â€“ C
136	rajatkumar854082	Rajat Kumar	2nd Sem	ical Engin	8.49	or- 2nd, 4th & 6th sem. â€“ C
137	anuradhakumari19	Anuradha kumari	2nd Sem	ical Engin	7.54	(Applicable for all students o
138	gulshan8213@gma	Gulshan Kumar	2nd Sem	ical Engin	8.05	(Applicable for all students o

139	rajh4277@gmail.c	Harsh Raj	2nd Sem	ical Engin	8.83	(Applicable for all students o
140	rajmilind20@gmai	Milind Raj	2nd Sem	ical Engin	8.34	or- 2nd, 4th & 6th sem. â€“ C
141	guddykumari307@	Guddy kumari	2nd Sem	ical Engin	4.71	(Applicable for all students o
142	arvindkumar85210	Arvind Kumar	2nd Sem	ical Engin	4.22	for- 2nd and 4th sem. - CSE/I
143	md994807@gmail	Md Aftab	2nd Sem	ical Engin	5.98	for- 2nd and 4th sem. - CSE/I
144	ashishkumar0952@	Ashish Kumar sinha	4th Sem	ical Engin	7.8	Java) (Applicable for- 4th & 6
145	kumar.rishabh420(	Kumar Rishabh	2nd Sem	ical Engin	8.54	(Applicable for all students o
146	pavangkumar01@g	Pavan kumar	6th Sem	ical Engin	7.6	licable for - 4th & 6th sem.â€
147	aftabmd762@gmai	Md Aftab	2nd Sem	ical Engin	7.78	or- 2nd, 4th & 6th sem. â€“ C
148	rajeshkranjan2000(	Rajesh Ranjan	2nd Sem	ical Engin	3.94	(Applicable for all students o
149	pr473797@gmail.c	Prince Raj	2nd Sem	ical Engin	3.97	for- 2nd and 4th sem. - CSE/I
150	prachisinghbg@gn	Prachi Singh	2nd Sem	ical Engin	7.83	or- 2nd, 4th & 6th sem. â€“ C
151	mrdeepaksaharsa@	Deepak Kumar	2nd Sem	ical Engin	5.42	for- 2nd and 4th sem. - CSE/I
152	amankumar65412(	Aman kumar	2nd Sem	ical Engin	6.85	(Applicable for all students o
153	iamtanya0219@gn	Tanya	2nd Sem	ical Engin	5.8	or- 2nd, 4th & 6th sem. â€“ C
154	kumarsandeepsinh	Sandeep Kumar Sinha	6th Sem	ical Engin	8.33	licable for - 4th & 6th sem.â€
155	a4amit847228@gn	Amit kumar yadav	2nd Sem	ical Engin	5.93	or- 2nd, 4th & 6th sem. â€“ C
156	rohanroyindia101(	ROHAN	4th Sem	ical Engin	7.41	g & Linux) (Applicable for- 4
157	sumitkumar63k@g	Sumit kumar	2nd Sem	ical Engin	6	or- 2nd, 4th & 6th sem. â€“ C
158	rdotkumar1999@g	Rakesh Kumar	4th Sem	ical Engin	7.3	licable for - 4th & 6th sem.â€
159	surajkumarrajak11	Suraj Kumar Rajak	4th Sem	ical Engin	7.8	licable for - 4th & 6th sem.â€
160	iamsushmakumari(	SUSHMA KUMARI	4th Sem	ical Engin	7.85	licable for - 4th & 6th sem.â€
161	hansrajfreedom@g	HANS RAJ KUMAR	4th Sem	ical Engin	5.77	g & Linux) (Applicable for- 4
162	pallavi28112001@	Pallavi kumari	2nd Sem	ical Engin	7.1	(Applicable for all students o
163	kumarmanish2102	MANISH KUMAR	4th Sem	ical Engin	8.36	licable for - 4th & 6th sem.â€
164	kumarrau22@gma	Rahul Kumar	2nd Sem	ical Engin	8.21	for- 2nd and 4th sem. - CSE/I
165	Prachikumarimfp@	Prachi Kumari	4th Sem	ical Engin	8.5	for- 2nd and 4th sem. - CSE/I
166	prabhu.kr26196@g	Prabhu Kumar	4th Sem	ical Engin	8.29	licable for - 4th & 6th sem.â€
167	nkneeraj028@gma	Neeraj Kumar	4th Sem	ical Engin	6.35	licable for - 4th & 6th sem.â€
168	adiaryan511@gma	Aditya Aryan	4th Sem	ical Engin	6.65	(Applicable for all students o
169	gauravkumarphuls	Gaurav kumar	4th Sem	ical Engin	7.77	licable for - 4th & 6th sem.â€
170	komaldeep47011@	KOMAL DEEP	4th Sem	ical Engin	8.39	licable for - 4th & 6th sem.â€
171	anukritikumari120	Anukriti kumari	2nd Sem	ical Engin	7.2	(Applicable for all students o
172	manishathakurbseb	Manisha Thakur	2nd Sem	ical Engin	7	(Applicable for all students o
173	kajalguptank121@	Kajal gupta	2nd Sem	ical Engin	4.83	(Applicable for all students o

174	abhinavkr2k18@g	Abhinav kumar	4th Sem	ical Engin	8.23	licable for - 4th & 6th sem.â€
175	ankitkumar5998@	Ankit Kumar	4th Sem	ical Engin	7.52	licable for - 4th & 6th sem.â€
176	sushilkumarpathak	Sushil kumar pathak	4th Sem	ical Engin	7.6	or- 2nd, 4th & 6th sem. â€“ C
177	yashwardhan548@	Yashwardhan	4th Sem	ical Engin	7.52	licable for - 4th & 6th sem.â€
178	sushant6kumar@g	sushant kumar	2nd Sem	ical Engin	7.76	or- 2nd, 4th & 6th sem. â€“ C
179	ravishankarkumars	Ravishankar Kumar Sonu	4th Sem	ical Engin	8.8	licable for - 4th & 6th sem.â€
180	Ymiankit315@gm	Ankit kumar	2nd Sem	ical Engin	6.2	(Applicable for all students o
181	mayursarman2212	Mayur Sarman	4th Sem	ical Engin	8.3	licable for - 4th & 6th sem.â€
182	vaishlansh@gmail.	Saurav Kumar	4th Sem	ical Engin	8	g & Linux) (Applicable for- 4
183	sakshipriya2647@	Sakshi priya	4th Sem	ical Engin	8.67	licable for - 4th & 6th sem.â€
184	jitendrakumarsinha	JITENDRA KUMAR SINHA	4th Sem	ical Engin	8.45	licable for - 4th & 6th sem.â€
185	ravirvarma184200	Raviranjan Varma	4th Sem	ical Engin	8.82	(Applicable for all students o
186	ajitkumar152201@	Ajit Kumar	4th Sem	ical Engin	8.22	(Applicable for all students o
187	atibhvermadbg@g	ATIBH VERMA	4th Sem	ical Engin	8.17	licable for - 4th & 6th sem.â€
188	mdzishan0101200	MD ZISHAN RAJA	4th Sem	ical Engin	7.5	(Applicable for all students o
189	priyaraj72001@gm	Priya Raj	4th Sem	ical Engin	8.56	licable for - 4th & 6th sem.â€
190	amarjeetprabhakar	Amarjeet prabhakar	2nd Sem	ical Engin	4.27	(Applicable for all students o
191	asifalam786.bits@	Md Asif Alam	4th Sem	ical Engin	8.43	licable for - 4th & 6th sem.â€
192	sonali801305@gm	Sonali kumari	4th Sem	ical Engin	8.8	licable for - 4th & 6th sem.â€
193	amarjeetkr5381@g	Amarjeet Kumar	4th Sem	ical Engin	7.59	or- 2nd, 4th & 6th sem. â€“ C
194	kumarmanish1321	MANISH KUMAR	4th Sem	ical Engin	6.92	bleu / power BI) (Applicable
195	satyamsingh6698@	Satyam	4th Sem	ical Engin	7.8	licable for - 4th & 6th sem.â€
196	naveenkumarsingh	Naveen Kumar Singh	4th Sem	ical Engin	6.65	or- 2nd, 4th & 6th sem. â€“ C
197	ravikr1591999@gr	Ravi ranjan Kumar	4th Sem	ical Engin	7.86	or- 2nd, 4th & 6th sem. â€“ C
198	pr1564849@gmail	Praveen Raj	2nd Sem	ical Engin	7.29	(Applicable for all students o
199	sauravk72@gmail.	Saurav Kumar	4th Sem	ical Engin	7.4	licable for - 4th & 6th sem.â€
200	dheeraj95555543t	Dheeraj kumar	2nd Sem	ical Engin	5.39	for- 2nd and 4th sem. - CSE/I
201	triptipriya782001@	Tripti priya	2nd Sem	ical Engin	7.63	or- 2nd, 4th & 6th sem. â€“ C
202	krajaram582@gma	Rajaram kumar	4th Sem	ical Engin	8.52	bleu / power BI) (Applicable
203	anushka6514@gm	Anushka Kumari	4th Sem	ical Engin	8.69	licable for - 4th & 6th sem.â€
204	praveengautam951	Praveen kumar gautam	4th Sem	ical Engin	5.2	licable for - 4th & 6th sem.â€
205	q9199870190@gm	Md Qamar Jawaid	4th Sem	ical Engin	8	or- 2nd, 4th & 6th sem. â€“ C
206	Divyaprakash391@	Divya Prakash	4th Sem	ical Engin	7.1	or- 2nd, 4th & 6th sem. â€“ C
207	shubh8320@gmail	SHUBHAM KUMAR	6th Sem	ical Engin	6.87	(Applicable for- 4th & 6th Se
208	anuragrpsmdb@gn	Anurag	4th Sem	ical Engin	7.85	licable for - 4th & 6th sem.â€

209	mausambharati57@	Mausam Bharati	4th Sem	ical Engin	8.05	olicable for - 4th & 6th sem.â€
210	rahulsingh083200(	Rahul Kumar	4th Sem	ical Engin	7.95	olicable for - 4th & 6th sem.â€
211	pk164612@gmail.(	Pankaj Kumar	4th Sem	ical Engin	7.03	olicable for - 4th & 6th sem.â€
212	najuk9211@gmail.	Najuk kumari	2nd Sem	ical Engin	5.63	for- 2nd and 4th sem. - CSE/I
213	ashish18arya@gma	Ashish Arya	4th Sem	ical Engin	7.69	(Applicable for all students o
214	14decguddukumar(	GUDDU KUMAR BAHARDAR	4th Sem	ical Engin	7.88	g & Linux) (Applicable for- 4
215	mausamjha776@g	Mausam Kumari	4th Sem	ical Engin	8.45	olicable for - 4th & 6th sem.â€
216	immahimakumari@	Mahima Kumari	4th Sem	ical Engin	7.22	olicable for - 4th & 6th sem.â€
217	sonam31102001@	SONAM KUMARI	2nd Sem	ical Engin	6.68	or- 2nd, 4th & 6th sem. â€“ C
218	www.saqlain87@g	Md Saqlain Mazhar	4th Sem	ical Engin	7.89	or- 2nd, 4th & 6th sem. â€“ C
219	shubhamrajbanti@	BANTI KUMAR	2nd Sem	IT	7.5	(Applicable for all students o
220	singhjianupam@gr	Anupam singh	6th Sem	IT	7.7	g & Linux) (Applicable for- 4
221	abhijha3820@gma	Kumar Abhishek	4th Sem	IT	7.2	Java) (Applicable for- 4th & 6
222	astha.shri24@gma	Astha	4th Sem	IT	7.01	(Applicable for- 4th & 6th Se
223	navnit845302@gm	Navneet kumar	6th Sem	IT	7.08	(Applicable for- 4th & 6th Se
224	mdobaidarif98@gr	Md Obaidullah	6th Sem	IT	7.02	(Applicable for- 4th & 6th Se
225	abhinav5678singh(	Abhinav kumar	4th Sem	IT	7.2	(Applicable for- 4th & 6th Se
226	lucklucky343@gm	Aviraj	2nd Sem	IT	7.89	(Applicable for all students o
227	murari4955@gmai	Krishna Murari	2nd Sem	IT	8.26	(Applicable for all students o
228	rkumarjha039@gn	Rahul kumar jha	6th Sem	IT	6.9	(Applicable for all students o
229	prityk702@gmail.(	Prity Kumari	6th Sem	IT	7.9	arning (Applicable for - 6th se
230	arpitanal1@gmail.(	Arpit Anand	2nd Sem	IT	5.25	or- 2nd, 4th & 6th sem. â€“ C
231	vishnudarshan5@g	Vishnu Darshan Kumar	4th Sem	IT	7	or- 2nd, 4th & 6th sem. â€“ C
232	pritykumari5408@	Shivani Kumari	2nd Sem	IT	7	(Applicable for all students o
233	ak353613@gmail.(	Abhishek Kumar	6th Sem	IT	6.75	(Applicable for- 4th & 6th Se
234	kumarijuhi0204@g	Juhi Kumari	4th Sem	IT	6.6	g & Linux) (Applicable for- 4
235	manishtarar776399	Manish kumar	2nd Sem	IT	3.77	or- 2nd, 4th & 6th sem. â€“ C
236	sumitpaswan199@	SUMIT PASWAN	4th Sem	IT	7.89	or- 2nd, 4th & 6th sem. â€“ C
237	md.sohail.mdb@gr	MD SOHAIL	4th Sem	IT	7.37	or- 2nd, 4th & 6th sem. â€“ C
238	shashiyadav76295	Shashi shekhar	4th Sem	IT	8.1	bleu / power BI) (Applicable
239	ank22kumar@gma	Ankit Kumar	6th Sem	IT	8.3	arning (Applicable for - 6th se
240	shantanu4216@gm	Shantanu Kumar	6th Sem	IT	6.93	arning (Applicable for - 6th se
241	sudhakarprakash1(	Sudhakar Prakash	6th Sem	IT	8.27	arning (Applicable for - 6th se
242	rishiraj6090@gma	Rishi Raj	2nd Sem	IT	4.8	or- 2nd, 4th & 6th sem. â€“ C
243	saurabhkr1322001(	SAURABH KUMAR	2nd Sem	IT	7.7	(Applicable for all students o

244	gauravkunal98@gr	Gaurav kumar	4th Sem	IT	5.96	(Applicable for- 4th & 6th Se
245	amanmit989@gma	Aman Kumar	2nd Sem	IT	8.23	for- 2nd and 4th sem. - CSE/I
246	mititmasum5298@	Masum Raja	6th Sem	IT	6.96	(Applicable for- 4th & 6th Se
247	mdsaifali0078696(	Md Saif Ali	2nd Sem	IT	5.14	(Applicable for all students o
248	mg15032000@gm	Mohammad Ghulam Mustafa	2nd Sem	IT	5.83	(Applicable for all students o
249	alishaan089@gma	Shaan Ali Arifi	4th Sem	IT	7.49	for- 2nd and 4th sem. - CSE/I
250	shekharsinha970@	Shekhar Kumar sinha	4th Sem	IT	8.12	or- 2nd, 4th & 6th sem. â€“ CS
251	kumarianjalirani20	Anjali kumari	6th Sem	IT	7.37	arning (Applicable for - 6th se
252	siddhu8252@gmai	SIDDHU KUMAR	2nd Sem	IT	6.63	(Applicable for all students o
253	sandeepkumar15ju	Sandeep Kumar	4th Sem	IT	7.5	Java) (Applicable for- 4th & 6
254	ayush.kr20000@gr	Ayush kumar	4th Sem	IT	7.6	bleu / power BI) (Applicable
255	deepakammu95@g	Deepak Kumar	6th Sem	IT	6.1	g & Linux) (Applicable for- 4
256	chandankumarpath	Chandan Kumar Pathak	2nd Sem	IT	7.83	(Applicable for all students o
257	vinitasomani1999(	Vineeta	6th Sem	IT	5.29	(Applicable for- 4th & 6th Se
258	ankit28jha@gmail.	Ankit Jha	6th Sem	IT	7.5	arning (Applicable for - 6th se
259	atulpandeysphs@g	ATUL KUMAR PANDEY	2nd Sem	IT	7.49	(Applicable for all students o
260	shailendracse1998(	LENDRA KUMAR VISHWAKA	6th Sem	IT	7.67	istration (Applicable for -4th
261	anuragkumarsharm	Anurag kumar sharma	6th Sem	IT	6.98	or- 2nd, 4th & 6th sem. â€“ CS
262	mehilovekumar@g	LUV	6th Sem	IT	7.09	or- 2nd, 4th & 6th sem. â€“ CS
263	singhpreeti5144@g	Preeti	6th Sem	IT	8.23	arning (Applicable for - 6th se
264	aminakhter1166@g	AMIN AKHTER	4th Sem	IT	7.72	or- 2nd, 4th & 6th sem. â€“ CS
265	tuufail786@gmail.	MD Tufail Ahmad	6th Sem	IT	6.8	(Applicable for- 4th & 6th Se
266	raviranjankumar01	Raviranjan Kumar	4th Sem	IT	8.31	istration (Applicable for -4th
267	amanchoudhary82	AMAN KUMAR	4th Sem	IT	5	bleu / power BI) (Applicable
268	priyadarshisandeep	Sandeep Priyadarshi	2nd Sem	her Engine	5.71	for- 2nd and 4th sem. - CSE/I
269	sfatima00786@gm	Shagufta Fatima	6th Sem	her Engine	8.4	(Applicable for all students o
270	pkraj0842@gmail.	Pankaj kumar	4th Sem	nical Engir	7	Applicable for- 4th & 6th sem
271	alokpankaj2017@g	Alok Kumar	6th Sem	nical Engir	7	Applicable for- 4th & 6th sem
272	abhimanyukrana@	ABHIMANYU KUMAR	6th Sem	nical Engir	8	Applicable for- 4th & 6th sem
273	vikashkumar42006	VIKASH KUMAR	6th Sem	nical Engir	7.59	Applicable for- 2nd & 4th sem.
274	prabhatkumar4615	Prabhat Kumar	4th Sem	nical Engir	8.16	Applicable for- 2nd & 4th sem.
275	kumarvikas101299	Vikas Kumar	4th Sem	nical Engir	5.24	Applicable for- 4th & 6th sem
276	haidarindian9956@	Md Haidar Ali	4th Sem	nical Engir	7.39	Applicable for- 4th & 6th sem
277	r.ranjan.solenoid@	RAVI RANJAN KUMAR	4th Sem	nical Engir	6.9	Applicable for- 4th & 6th sem
278	saliff007@gmail.c	Salif khan	6th Sem	nical Engir	8.34	sys (Applicable for- 6th sem. N

279	saubhikgolu@gma	Saubhik Kumar Mahto	6th Sem	nical Engir	8.14	sys (Applicable for- 6th sem. N
280	rraj2071@gmail.co	RAHUL RAJ	4th Sem	nical Engir	5.09	Applicable for- 2nd & 4th sem.
281	aryarandhirkumar(	RANDHIR KUMAR	6th Sem	nical Engir	8.47	Applicable for- 4th & 6th sem
282	gmayankgautam18	Mayank Gautam	6th Sem	nical Engir	8.4	sys (Applicable for- 6th sem. N
283	surajmit9155@gm	Suraj Kumar	4th Sem	nical Engir	7.66	Applicable for- 4th & 6th sem
284	ajitkumarjh1041@	Ajit kumar paswan	4th Sem	nical Engir	4.4	Applicable for- 4th & 6th sem
285	rajshree3082001@	Raj shree	4th Sem	nical Engir	9.15	Applicable for- 2nd & 4th sem.
286	116suprity116@gr	Suprity Kumari	4th Sem	nical Engir	8.72	Applicable for- 4th & 6th sem
287	gauravknov2017@	GAURAV KUMAR	4th Sem	nical Engir	7.3	Applicable for- 2nd & 4th sem.
288	sonusehwag12345	ABHISHEK KUMAR SHARMA	4th Sem	nical Engir	8.07	Applicable for- 4th & 6th sem
289	animasharma0149(	ANIMA SHARMA	4th Sem	nical Engir	7.32	Applicable for- 4th & 6th sem
290	sujittiwarinainijore	SUJIT TIWARI	4th Sem	nical Engir	8.4	Applicable for- 4th & 6th sem
291	knitish752@gmail.	NITISH KUMAR	6th Sem	nical Engir	8.02	sys (Applicable for- 6th sem. N
292	subhamsinha6578(	Shubham Sinha	2nd Sem	nical Engir	4.51	Applicable for- 2nd & 4th sem.
293	sushantvts@gmail.	Sushant Kumar jha	2nd Sem	nical Engir	7	(Applicable for all students o
294	omghyt@gmail.co	Om Prakash Ram	2nd Sem	nical Engir	3.86	Applicable for- 2nd & 4th sem.
295	nikhilraj80115@gr	NIKHIL RAJ UPADHYAY	2nd Sem	nical Engir	3.3	Applicable for- 2nd & 4th sem.
296	gk7062761@gmail	Gautam Kumar	2nd Sem	nical Engir	5	(Applicable for all students o
297	gaurav.gs1199@gr	Gaurav kumar	6th Sem	nical Engir	6.8	sys (Applicable for- 6th sem. N
298	twinklerani0206@	Twinkle Rani	2nd Sem	nical Engir	8.37	Applicable for- 2nd & 4th sem.
299	digambar4kumar2(	Digambar Kumar	2nd Sem	nical Engir	7.43	Applicable for- 4th & 6th sem
300	amarjeet2000pcc@	AMARJEET THAKUR	2nd Sem	nical Engir	5	ecture (Applicable for- 2nd &
301	rk7845227@gmail	Rahul Kumar	2nd Sem	nical Engir	5.9	arning (Applicable for - 6th se
302	emutsav@gmail.co	Utsav Kumar	2nd Sem	nical Engir	8.3	Applicable for- 2nd & 4th sem.
303	pradyumankr9006(	Pradyumn kumar	2nd Sem	nical Engir	2.71	Applicable for- 2nd & 4th sem.
304	aksabhinavsharma	Abhinav Sharma	2nd Sem	nical Engir	7.1	Applicable for- 2nd & 4th sem.
305	madankumar8474(	Madan Kumar Das	4th Sem	nical Engir	6.79	Applicable for- 4th & 6th sem
306	vivekrocky926@g	Vivekanand Pandey	2nd Sem	nical Engir	9.01	Applicable for- 2nd & 4th sem.
307	vk60880@gmail.c	VIKRAM KUMAR	6th Sem	nical Engir	7.69	Applicable for- 4th & 6th sem
308	ashwanikumar990	Ashwani kumar	6th Sem	nical Engir	7.89	sys (Applicable for- 6th sem. N
309	ckrroy6547@gmai	Chandan Kumar	6th Sem	nical Engir	7.85	sys (Applicable for- 6th sem. N
310	chandrapratyush10	Pratyush Chandra	6th Sem	nical Engir	8.3	Applicable for- 4th & 6th sem
311	aarohi29032001@	Aarohi	2nd Sem	nical Engir	3.57	Applicable for- 2nd & 4th sem.
312	rajritu7048@gmail	Ritu Raj	2nd Sem	nical Engir	6	Applicable for- 2nd & 4th sem.
313	amar.rishi.dev96@	Amar Kumar Rishi Dev	6th Sem	nical Engir	5.93	sys (Applicable for- 6th sem. N

314	mdh001933@gma	Md Hakim	2nd Sem	nical Engir	2.34	(Applicable for all students o
315	shivam29398@gm	Shivam	6th Sem	nical Engir	8.44	sys (Applicable for- 6th sem. M
316	sumitthakur5699@	Sumit kumar thakur	6th Sem	nical Engir	8.09	sys (Applicable for- 6th sem. M
317	rahulsharmamuzaf	Rahul Kumar	2nd Sem	nical Engir	6.67	or- 2nd, 4th & 6th sem. â€“ CS
318	m.swamiji007@gn	Anurag priyadarshi	2nd Sem	nical Engir	7.34	Applicable for- 2nd & 4th sem.
319	kishormit99@gma	Raj kishor gupta	4th Sem	nical Engir	6.72	Applicable for- 2nd & 4th sem.
320	dheerajkumar9022	Dheeraj Kumar	4th Sem	nical Engir	6.76	Applicable for- 4th & 6th sem
321	rahulkumar199812	Rahul Kumar	4th Sem	nical Engir	7.32	Applicable for- 4th & 6th sem
322	sudhanshuranjan1(	Sudhanshu Ranjan	4th Sem	nical Engir	7.55	Applicable for- 4th & 6th sem
323	gopihzp@gmail.co	Gopi Kumar	2nd Sem	nical Engir	7.91	Applicable for- 2nd & 4th sem.
324	aniketkumar2921@	Aniket kumar	6th Sem	nical Engir	8.12	sys (Applicable for- 6th sem. M
325	vickykumar252001	Vicky kumar	2nd Sem	nical Engir	6.09	Applicable for- 2nd & 4th sem.
326	ranjanmano2001@	Manoranjan	2nd Sem	nical Engir	8.45	Applicable for- 2nd & 4th sem.
327	vikashkumarstar89	Vikash Kumar	2nd Sem	nical Engir	2.6	Applicable for- 4th & 6th sem
328	kumarbanti804406	Banti Kumar	2nd Sem	nical Engir	4.69	Applicable for- 2nd & 4th sem.
329	abhi7301200774@	Abhishek Kumar Singh	2nd Sem	nical Engir	7.43	(Applicable for all students o
330	rahulrajsharma204	Rahul Raj Sharma	2nd Sem	nical Engir	7.1	Applicable for- 2nd & 4th sem.
331	mmeraj5445@gma	MD MERAJ	2nd Sem	nical Engir	4.6	Applicable for- 2nd & 4th sem.
332	manzar2018self@g	MANZAR IMAM	2nd Sem	nical Engir	8.29	Applicable for- 2nd & 4th sem.
333	kumarvivek85675(	Vivek Kumar	2nd Sem	nical Engir	4.97	Applicable for- 2nd & 4th sem.
334	sonalipriya551@gı	Sonali priya	2nd Sem	nical Engir	8.37	or- 2nd, 4th & 6th sem. â€“ CS
335	shubhamraj4560@	Shubham Raj	2nd Sem	nical Engir	7.46	Applicable for- 2nd & 4th sem.
336	ushakumari3927@	USHA KUMARI	2nd Sem	nical Engir	4.97	Applicable for- 2nd & 4th sem.
337	rajnishkumarmrh5	Rajnish kumar	2nd Sem	nical Engir	6.46	(Applicable for all students o
338	vikashdubey8211@	Vikash Dubey	2nd Sem	nical Engir	8.14	Applicable for- 2nd & 4th sem.
339	tannukumari943@	Tannu kumari	2nd Sem	nical Engir	3.37	Applicable for- 2nd & 4th sem.
340	aniketkrsuman@gı	Aniket Kumar	2nd Sem	nical Engir	6.97	Applicable for- 2nd & 4th sem.
341	shanirajkumar012(	SHANIRAJ KUMAR	2nd Sem	nical Engir	2.31	(Applicable for all students o
342	chandan845453@g	Chandan Kumar Yadav	4th Sem	nical Engir	6.93	Applicable for- 4th & 6th sem
343	Sur8292@gmail.cc	Suraj kant kumar	4th Sem	nical Engir	6.2	Applicable for- 4th & 6th sem
344	monu16237@gma	MONU KUMAR	4th Sem	nical Engir	5.96	Applicable for- 4th & 6th sem
345	vikashkumar82944	VIKASH KUMAR	2nd Sem	nical Engir	5.15	(Applicable for all students o
346	akashkumarssmm1	Akash kumar	2nd Sem	nical Engir	7.74	Applicable for- 2nd & 4th sem.

Annexure 7.1

GATE 2021 training hours:

S. No.	Department	No. of hours of GATE training
1	Civil Engineering	101
2	Electrical Engineering	79
3	Electronics & Communication	108
4	Leather Technology	19
5	Mechanical Engineering	123
Total		**430**

Annexure- 7.2

Payment of GATE 2020							
SR. No.	Name	Branch	College Registration No.	Registration no.	Application fee	Test Fee	Total
1	Abhijeet raj	CE	16101107056	CE20S74011060	1500	0	1500
2	Akash kumar	CE	16101107002	CE20S74011103	1500	1062	2562
3	Akhilesh kumar	CE	16101107018	CE20S84011189	750	0	750
4	ANKIT KUMAR	CE	16101107015	CE20S84011198	1500	0	1500
5	Ashish Kumar	CE	16101107021	CE20S74011055	1500	2832	4332
6	Bipin Kumar Patel	CE	16101107029	CE20S84011174	1500	1062	2562
7	GOLDEN KUMAR	CE	16101107049	CE20S84011188	1500	0	1500
8	HASAN REZA	CE	17101107909	CE20S84011204	1500	0	1500
9	Jagat Narayan	CE	16101107005	CE20S84011126	1500	1534	3034
10	Jay Prakash Kumar	CE	16101107045	CE20S84011031	1500	0	1500
11	KAVIRANJAN KUMAR	CE	16101107044	CE20S74011135	1500	0	1500
12	Manish Kumar	CE	16101107019	CE20S84011199	1500	1534	3034
13	Manish kumar	CE	16101107040	CE20S74011211	1500	0	1500
14	Md Qamre Alam	CE	16101107055	CE20S74011213	1500	377	1877
15	Navneet kumar Nayan	CE	16101017016	CE20S84011205	750	0	750
16	Pankaj Kumar	CE	17101107901	CE20S84011080	1500	129	1629
17	PANKAJ KUMAR	CE	16101107043	CE20S84011202	1500	1534	3034
18	Prabhat ranjan	CE	17101107906	CE20S84011113	1500	0	1500
19	RAHUL KUMAR MISHRA	CE	16101107037	CE20S74011010	1500	0	1500
20	RAJEEV RANJAN	CE	16101107058	CE20S74011043	1500	1888	3388
21	Rakesh Kumar	CE	16101107013	CE29S74011096	1500	0	1500
22	Ratnesh paswan	CE	17101107902	CE20S84011084	750	0	750
23	RAUSHAN KUMAR	CE	16101107025	CE20S84011201	1500	1534	3034

24	RICHA SINHA	CE	16101107014	CE20S74011071	750	1534	2284
25	Risabh Kumar	CE	16101107004	CE20S74011040	1500	1062	2562
26	ROHIT KUMAR	CE	16101107010	CE20S84011046	1500	0	1500
27	Roshan kumar	CE	16101107060	CE20S84011097	1500	0	1500
28	sandeep kumar guddu	CE	16101107008	CE20S84011034	1500	0	1500
29	Sanjeev kumar	CE	16101107024	CE20S84011094	1500	1062	2562
30	Saroj kumar	CE	17101107905	CE20S74011176	1500	0	1500
31	saurabh kumar	CE	16101107006	CE20S84011133	1500	1062	2562
32	Saurav Kumar Singh	CE	15101107030	CE20S74011177	1500	0	1500
33	SHAMBHU KUMAR	CE	16101107038	CE20S84011178	1500	1062	2562
34	Shashi Shekhar Kumar	CE	16101107009	CE20S84011184	1500	129	1629
35	Shivam Kumar Singh	CE	16101107003	CE20S74011111	1500	0	1500
36	SONU KUMAR	CE	16101107061	CE20S84015534	750	0	750
37	SUMIT KUMAR	CE	16101107031	CE20S74014077	750	0	750
38	SUMIT KUMAR GUPTA	CE	16101107026	CE20S74011100	1500	3020	4520
39	Swati	CE	16101107017	CE20S84015449	750	1534	2284
40	Vibhishan kumar	CE	16101107020	CE20S84011106	750	0	750
41	VISHNUKANT KUMAR	CE	17101107907	CE20S84011183	1500	0	1500
42	Vivek kumar	CE	16101107023	CE20S84011093	1500	0	1500
43	YASHBINDRA KUMAR	CE	16101107022	CE20S84011022	1500	0	1500
44	ABHISHEK KUMAR	ME	16102107008	ME20S24015304	1500	0	1500
45	Abhishek Anand	ME	16102107013	ME20S24011087	1500	1499	2999
46	Alok Araya	ME	16102107003	ME20S24011011	1500	1534	3034
47	AMIT KUMAR	ME	16102107034	ME20S14011228	1500	0	1500
48	Anand Mohan jha	ME	17102107904	ME20S14011207	1500	0	1500
49	ANUBHAV SHRIVASTAVA	ME	16102107009	ME20S24014440	1500	1070	2570

50	ASHUTOSH KUMAR	ME	16102107057	ME20S24011077	1500	1062	2562
51	ASHUTOSH KUMAR JHA	ME	16102107059	ME20S24011047	1500	1062	2562
52	Ashutosh sinha	ME	16104107033	ME20S24011096	1500	0	1500
53	Avinash kumar	ME	16102107016	ME20S14011277	750	1534	2284
54	Chandan Kumar	ME	17102107905	ME20S14011044	1500	2006	3506
55	FAIZ ANWAR	ME	16102107039	ME20S24011110	1500	1534	3034
56	Guddu Kumar	ME	17102107907	ME20S24011069	1500	0	1500
57	KANHAIYA KUMAR	ME	16102107049	D214D34	1500	377	1877
58	KANHAIYA KUMAR	ME	16102107026	ME20S14011197	1500	1534	3034
59	Krishna Kumar	ME	16102107029	ME20S14011212	1500	1534	3034
60	Lalan kumar	ME	16102107045	ME20S24011108	750	0	750
61	MD AKRAM ALAM	ME	16102107011	ME20S14011003	750	0	750
62	Md Taslim	ME	16102107019	ME20S14014732	1500	0	1500
63	Mithun Kumar	ME	16102107018	ME20S24011189	750	1062	1812
64	Mukund kumar	ME	16102107002	ME20S24011228	1500	0	1500
65	NANDAN KUMAR	ME	16102107028	ME20S24015248	1500	1062	2562
66	Nawlesh kumar	ME	16102107007	ME20S14011305	1500	0	1500
67	Nidhi kumari gupta	ME	16102107058	ME20S24011172	750	1062	1812
68	Nishant Kiran	ME	15102107104	ME20S24011129	1500	0	1500
69	Prince kumar	ME	16102107024	ME20S24015545	750	1888	2638
70	Rahul kumar	ME	16102107053	ME20S14013383	1500	1062	2562
71	RAHUL PRASAD	ME	16102107030	ME20S24011143	1500	1534	3034
72	Rajhans kumar	ME	16102107005	ME20S24011170	750	0	750
73	Ratan Kumar	ME	16102107014	ME20S14011270	1500	1132	2632
74	Raushan Kumar	ME	16102107046	ME20S24011067	1500	0	1500
75	RAUSHAN KUMAR	ME	16102107015	ME20S14011134	1500	0	1500
76	Rupesh kumar	ME	16102107037	ME20S24011174	1500	1534	3034

77	Sandeep Rahul	ME	16102107012	ME20S24011182	1500	1178	2678
78	SANGAM KUMAR	ME	17102107903	ME20S14011110	1500	0	1500
79	Shailendra Kumar	ME	16102107031	ME20S24011084	750	0	750
80	SHASHI BHUSHAN KUMAR	ME	16102107006	ME20S24011253	1500	1062	2562
81	Shashi kumar	ME	16102107021	ME20S24013380	750	0	750
82	SHATRUDHAN KUMAR	ME	16102107035	ME20S14011273	1500	472	1972
83	Shiwangi kumari	ME	16102107025	ME20S24011119	750	1062	1812
84	Sonu kumar	ME	16102107054	ME20S14011129	750	0	750
85	SUDHANSHU KUMAR SHARMA	ME	17102107901	ME20S24011049	750	1534	2284
86	suman bharti keshav	ME	16102107001	ME20S14011133	1500	1062	2562
87	SUNNY KUMAR	ME	17102107910	ME20S24014539	1500	0	1500
88	SURENDRA KUMAR	ME	16102107055	ME20S14011102	1500	0	1500
89	UJJWAL KUMAR	ME	16102107052	ME20S24011135	1500	0	1500
90	VED PRAKASH	ME	16102107047	ME20S24015282	1500	1062	2562
91	Vinod kumar	ME	16102107041	ME20S14011007	750	472	1222
92	Vishal Kumar	ME	16102107051	ME20S14011271	1500	0	1500
93	Vishal kumar	ME	16102107010	ME20S14011181	750	1534	2284
94	Vishal Kumar	ME	16102107044	ME20S14011012	1500	0	1500
95	Vishwanath Kumar	ME	16102107023	ME20S14011064	1500	1888	3388
96	Vivek kumar	ME	16102107022	ME20S24011066	1500	1062	2562
97	Akshat Raj	EE	16103107048	EE20S54011311	1500	1062	2562
98	Alok kumar	EE	16103107027	EE20S54011102	1500	472	1972
99	AMITESH KUMAR	EE	16103107002	EE20S54011105	1500	0	1500
100	ANAND KUMAR	EE	17103107905	EE20S54011023	750	0	750
101	Anjali kumari	EE	16103107045	EE20S54014334	750	0	750
102	ANJAN KUMAR	EE	16103107055	EE20S54011307	1500	1534	3034
103	ANKIT RAJ	EE	16103107026	EE20S54011387	1500	0	1500
104	Arpit Anand	EE	16103107036	EE20S54011142	1500	377	1877
105	Bajrangi Kumar	EE	16103107008	EE20S54011263	1500	0	1500

106	DEVENDRA KUMAR	EE	16103107015	EE20S54011211	1500	0	1500
107	Golden Kumar	EE	16103107006	EE20S54011108	1500	0	1500
108	GUNJAN KUMAR	EE	16103107039	EE20S54011335	1500	1534	3034
109	Keshav Chandra	EE	16103107062	EE20S54011350	1500	377	1877
110	KULDEEP THAKUR	EE	16103107011	EE20S54011123	1500	0	1500
111	Manish Kumar Choudhary	EE	17103107903	EE20S541316	750	0	750
112	Manoj Kumar Soni	EE	16103107004	EE20S54011233	1500	0	1500
113	Md hasim jilani	EE	16103107050	EE20S54011089	1500	0	1500
114	Md Saifullah Sadique	EE	16103107049	EE20S54011017	1500	1062	2562
115	Murli Manohar	EE	16103107009	EE20S54011319	1500	1062	2562
116	Naman kumar	EE	16103107058	EE20S54011040	750	377	1127
117	Neeraj kumar	EE	16103107023	EE20S54011114	1500	1534	3034
118	Nishant Raj	EE	16103107042	EE20S54011173	1500	1287	2787
119	Nitish Kumar Rajak	EE	16103107044	EE20S54011367	750	1062	1812
120	POONAM KUMARI	EE	17103107910	EE20S54011204	750	1534	2284
121	Pratap Chandra Choudhary	EE	16103107028	EE20S54011031	1500	1416	2916
122	PRATIK ANAND	EE	16103107051	EE20S54011062	1500	1534	3034
123	Praveen Divakar	EE	16103107047	EE20S54011157	1500	1062	2562
124	Preeti Kumari	EE	16103107025	EE20S54016334	750	1062	1812
125	Priyam Kumari	EE	16103107022	EE20S54011057	750	0	750
126	RAJEEV RANJAN PRASAD	EE	16103107037	EE20S54011275	750	0	750
127	Rajnandani	EE	16103107053	EE20S54011333	750	1062	1812
128	Ravi Kumar	EE	16103107003	EE20S54011234	1500	0	1500
129	Rishabh Kumar	EE	16103107013	EE20S54011290	1500	377	1877
130	Ritesh Raj	EE	16103107057	EE20S54011158	1500	1062	2562
131	Rohan raj	EE	17103107904	EE20S54011167	750	0	750
132	saket	EE	16103107043	EE20S54015125	1500	1534	3034
133	Sandeep Kumar	EE	16103107056	EE20S54011148	1500	1534	3034
134	sanjay kumar yadav	EE	16103107033	EE20S54011033	1500	1062	2562
135	Seema kumari	EE	16103107040	EE20S54011215	750	0	750
136	Suman Kumar	EE	16103107007	EE20S54011043	1500	0	1500
137	Suman kumar bhartiya	EE	16103107029	EE20S54011288	1500	1534	3034
138	Sumit kumar	EE	16103107060	EE20S54011127	1500	1062	2562
139	Sweta Bharti	EE	16103107030	EE20S54013277	750	1062	1812
140	Ujjawal kumar	EE	16103107031	EE20S54011364	1500	1062	2562
141	Vikash kumar ray	EE	16103107024	EE20S54011003	750	377	1127
142	Vipin Singh	EE	16103107061	EE20S54011149	1500	1062	2562
143	Vipul mishra	EE	16103107038	EE20S54011244	1500	1062	2562
144	Vivek kumar	EE	17103107901	EE20S54011349	1500	0	1500
145	Vivek Kumar	EE	16103107052	EE20S54011166	1500	1062	2562

146	Aditya Ranjan	IT	16106107032	CS20S64011341	1500	1534	3034
147	Aditya Singh	IT	16106107006	CS20S64011069	1500	1534	3034
148	Anshuli Kumari	IT	16106107013	CS20S64011210	750	0	750
149	Aparna Kumari	IT	16106107003	CS20S64011056	750	1070	1820
150	APOORVA RATHORE	IT	16106107036	CS20S64011197	750	0	750
151	Ayushman	IT	16106107033	CS20S64011280	1500	0	1500
152	Deepa Kumari	IT	16106107026	CS20S64015358	750	1062	1812
153	Gaurav Kumar	IT	16106107031	CS20S64011228	1500	1534	3034
154	Ishita Shreya	IT	16106107001	CS20S64011199	750	1062	1812
155	Kumari Jahanvi	IT	16106107023	CS20S64011157	750	0	750
156	MD ASIF EQUBAL	IT	17106107903	CS20S64011299	1500	0	1500
157	MD KAIFEE	IT	16106107017	CS20S64011302	1500	0	1500
158	PRIYA BHARTI	IT	16106107012	CS20S64011070	750	0	750
159	SAURABH MISHRA	IT	16106107025	CS20S64011062	1500	0	1500
160	Tulsi kumari	IT	17106107901	CS20S64011061	750	0	750
161	VICKY KUMAR	IT	16106107016	CS20S64011327	750	0	750
162	Abhimanyu kumar	ECE	16104107002	EC20S44011042	1500	1062	2562
163	Aghaz junaid	ECE	16104107005	EC20S44011020	1500	0	1500
164	DEEPAK KUMAR GUPTA	ECE	16104107020	EC20S44011144	1500	0	1500
165	Kishan kumar	ECE	16104107016	EC20S44011121	1500	0	1500
166	MD SARVAR ALI	ECE	16104107021	EC20S44011092	1500	768	2268
167	Neha praveen	ECE	16104107010	EC20S44011156	750	0	750
168	Nitish kumar	ECE	16104107025	EC20S44011024	1500	0	1500
169	Om Prakash	ECE	16104107011	EC20S44011101	1500	0	1500
170	Prashant Kumar	ECE	16104107036	EC20S44011162	1500	1520	3020
171	Puja kumari	ECE	16104107039	EC20S44014320	750	1534	2284

172	Ragini kumari	ECE	17104107905	EC20S44011034	750	0	750
173	Rahul Ranjan kapri	ECE	16104107022	Ec20S44011167	1500	1132	2632
174	RAJU KUMAR	ECE	16104107018	EC20S44011056	1500	0	1500
175	Ritul Kumari	ECE	17104107906	EC20S44011202	750	0	750
176	Shimpi kumari	ECE	16104107024	EC20S44011068	750	0	750
177	Shivani	ECE	16104107019	EC20S44014291	750	472	1222
178	Shreya Anand	ECE	16104107004	EC20S44011002	750	0	750
179	Subham Raj	ECE	16104107006	EC20S44011093	750	0	750
180	Sugandha kumari	ECE	16104107035	EC20S44011062	750	0	750
181	Vimla Bharti	ECE	16104107032	EC20S44011183	750	1534	2284
182	VISHAL KUMAR	ECE	16104107027	EC20S44011098	1500	0	1500
183	Pawan Kumar	CE	16101107036	CE20S84015094	1500	1062	2562
184	Jyoti kumari	CE	16101107011	CE20S74011144	750	1062	1812
185	Aayush Anant	CE	16101107059	CE20S74011015	1500	1534	3034
186	Mani Shankar	CE	16101107053	CE20S74011101	1500	1534	3034
187	Bipin Bihari	CE	16101107007	CE20S84011042	1500	0	1500
188	Sonu Raj	CE	16101107041	CE20574011137	750	1062	1812
189	Sonu Kumar	CE	16101107051	CE20574011113	1500	0	1500
190	Riya kumari	CE	16101107050	CE20S84011061	750	1062	1812
191	RAKESH RAM	ME	17102107909	ME20S24011109	750	0	750
192	Sunita kumari	EE	16103107019	EE20S54014739	750	1062	1812
193	SHANTANU KUMAR SINGH	EE	16103107034	EE20S54011232	1500	1534	3034
194	CHANDAN KUMAR THAKUR	EE	16103107017	EE20S54011154	1500	1416	2916
195	Arvind Kumar	EE	16103107018	EE20S54011372	1500	0	1500
196	Aman Shrivastava	LT	16107107005	CH20S34011022	1500	0	1500
197	Archana Kumari	LT	16107107001	CH20S34011080	750	0	750
198	Deepshi	LT	16107107008	CH20S34011004	750	0	750

199	Kritika vagmi	LT	16107107011	CH20S34011018	750	0	750
200	Rakesh kumar	LT	16107107010	CH20S34011063	1500	0	1500
201	Rakesh kumar sah	LT	16107107009	CH20S34011049	1500	0	1500
202	Amrit Raj	ME	16102107027	ME20S14014674	1500	1888	3388
203	Deepali Mehra	B.Pharm	16109107002	XL20S34011074	750	0	750
204	Ruby Kumari	IT	16106107011	CS20S6411019	750	1534	2284
205	Anurag Kumar Gupta	IT	16106107022	CS20S64011333	1500	0	1500
206	Sanjay Kumar	IT	16106107014	CS20S64011329	1500	0	1500
207	Vikas Kumar Bharti	ME	16102107004	ME20S24013325	0	1888	1888
208	Anand Mohan Singh	ME	16102107048	ME20S14014637	1500	1534	3034
209	Ravindra Ram	LT	16107107003	CH20S34011009	750	0	750
210	Prabhakar Kumar	ME	16102107040	ME20S14015033	0	1062	1062
211	Shagufta Anjum	EE	16103107046	EE20S54011018	0	1062	1062
212	Nishant Kiran	ME	15102107104	ME20S24011129	1500	1178	2678
213	Shagufta Shaheen	IT	16106107007	CS20S64011313	750	0	750
				Total	**264750**	**131975**	**396725**

Annexure 8.1

-	Component	HEAD	2017-2018			2018-2019				2019-20					2020-21		TOTAL
			OCTOBER DEC-2017 (Q-3)		JANUARY MARCH 2018 (Q-4)	APR TO JUNE 18 (Q-1)	JULY TO SEPT 18 (Q-2)	OCT TO DEC 18 (Q-3)	JAN TO MARCH 19(Q-4)	APRIL TO JUNE 19 (Q-1)	JULY TO SEP 2019 (Q-2)		OCT TO DEC 2019 (Q-3)	JAN TO MARCH 2020	APRIL TO JUNE 2020	JULY TO SEP 2020	
			Payment	Debit failure							Payment	Debit failure					
1	Procurement of goods	1.1.1.1	0		0	0	4212859	9104004	6110393	10981062	12720565		3674773	0	0	0	46803656
2		1.1.1.2	0		0	1042176	1386500	704900	0	1498600	1843430		4860290	0	0	0	11335896
3		1.1.1.3	0		0	0	0	628500	1369541	0	0		1248487	0	0	0	3246528
4		1.1.1.4	0		0	0	0	0	0	304425	0		4000000	309495	0	0	4613920
Total			**0**	**0**	**0**	**1042176**	**5599359**	**10437404**	**7479934**	**12784087**	**14563995**		**13783550**	**309495**	**0**	**0**	**66000000**
5	Academic processes	1.1.2.1	33190	9000	49364	37500	99197	119610	688068	748106	1660274		1223034	1678301	863461	777500	7986605
6		1.1.2.2	0		114090	0	0	0	0	0	0		0	0	0	0	114090
7		1.1.2.3	0		275438	0	235750	225000	917662	170388	99839		1141871	429660	897124	168606	4561338
8		1.1.2.4	0		371498	111369	1056569	204348	745524	1008765	1430645		1377411	937643	214601	220988	7679361
9		1.1.2.5	0		0	42267	0	32768	274260	75216	165989		0	25608	0	0	616108
10		1.1.2.6	0		0	0	0	0	0	90050	37090		43226	236312	24886	0	431564
11		1.1.2.7	0		48815	0	0	0	12500	22780	439879		0	21454	0	199055	744483
12		1.1.2.8	0		51251	6030	207958	485015	1160509	2515596	393110		295615	156141	379628	58240	5709093
13		1.1.2.9	0		57069	71763	62408	51145	216681	138814	81719		197702	127732	0	0	1005033
14		1.1.2.10	0		16198	0	0	0	0	0	0		0	0	0	0	16198
15		1.1.2.11	0		24440	13770	12240	57582	101303	26553	219063		204728	527506	158655	22146	1367986
Total			**33190**	**9000**	**1008163**	**282699**	**1674122**	**1175468**	**4116507**	**4796268**	**4527608**		**4483587**	**4140357**	**2538355**	**1446535**	**30231859**
16	Operating cost	1.1.3.1	167228		49531	4223	0	25807	159027	196296	141025		97096	65737	428679	18718	1353367
17		1.1.3.2	9471		0	0	35000	0	134646	189607	117295		131966	307363	292813	75054	1293215
18		1.1.3.3	138917	15595	15299	67017	0	42599	95336	138888	26835		146952	57387	68270	81257	894352
19		1.1.3.4	115790		89908	73439	86304	38945	131965	117359	172491		2838	31642	29121	87739	977541
20		1.1.3.5	3780		22355	0	0	16238	47894	30264	26144		33776	0	0	0	180451
21		1.1.3.6	23218		19595	32762	44692	27720	119191	13570	27497		37726	30510	0	0	376481
22		1.1.3.7	0	38000	76000	107000	149000	219166	487500	375000	389850		388500	403300	400500	140025	3173841
Total			**458404**	**53595**	**272688**	**284441**	**314996**	**370475**	**1175559**	**1060984**	**901137**		**838854**	**895939**	**1219383**	**402793**	**8249248**
Grand Total (PLA)			**491594**	**62595**	**1280851**	**1609316**	**7588477**	**11983347**	**12772000**	**18641339**	**19992740**		**19105991**	**5345791**	**3757738**	**1849328**	**104481107**
23	Faculty Reforms	1.1.4.1	0		4959172	6063909	3571205	4321784	10248032	6677958	6620622	63630	6146153	6455040	6223546	2102198	63453249
TOTAL			**491594**	**62595**	**6240023**	**7673225**	**11159682**	**16305131**	**23020032**	**25319297**	**26613362**		**25252144**	**11800831**	**9981284**	**3951526**	**167934356**
PFMS M-32 REPORT			**554189**		**6240023**	**7673225**	**11182697**	**16282116**	**23020032**	**25319297**	**26676992**		**25252144**	**11800831**	**9981284**	**3951526**	**167934356**
DIFFERENCE			***62595**		**0**	**0**	***23015**	*23015	0	0	**63630**		0	0	0		0

Annexure -9.1			
Academic Activities			
Sl. No.	Topic Name	Date	
1	Digital Changes in Industry and Career Prospects After Engineering	24-08-2020	
2	Career and Future Prospects in Drugs, Cosmetic and Medical Device Enforcement Agencies	22-08-2020	
3	Introduction to Robotics	20-08-2020	24-08-2020
4	Internet of Things Using Arduino And Thing Speak	21-08-2020	22-08-2020
5	Campus to Corporate- Life Changes	20-08-2020	
6	Technology Development in GIS Like, AI/ML Tools, Image Handling and Analysis, Drone Data Management	25-08-2020	
7	Chandrayaan-2 Overview & Application	19-08-2020	
8	The Big Bang Experiment and Technological Spin-Offs	31-07-2020	
9	Career Guidance for Civil Engineering Graduates	05-07-2020	08-07-2020
10	Motivation for Research and Innovation	25-07-2020	

Annexure 10.1 a

S.no		Course Name	Roll Number	Email Id	Department	Study year	College Roll no	ent score out of 100
1	Pankaj Kumar	tal Land Surveying And Mapping (DLS	NPTEL20CE18S1194495	kumarnwd8899@gm	Civil Engineering	1	19c31	87
2	Vikash Kumar	Geotechnical Engineering - 1	NPTEL20CE25S1353003	kash.vk649@gmail.c	Civil Engineering	3	17C47	82
3	Abhijeet Kumar	Geotechnical Engineering - 1	NPTEL20CE25S1609232	ijeetcivil27@gmail.c	Civil Engineering	3	18(LE)C11	100
4	Nicky Kumari	Geotechnical Engineering - 1	NPTEL20CE25S1025399	ykumari.nki@gmail.	Civil Engineering	3	17C37	98
5	Arunkumarsingh	Geotechnical Engineering - 1	NPTEL20CE25S1331511	undbg314@gmail.co	Civil Engineering	3	17C13	100
6	Vikash Kumar	Geotechnical Engineering - 1	NPTEL20CE25S1162326	siwan841203@gma	Civil Engineering	3	17C32	90
7	Vikas Kumar	oblem solving through Programming In	NPTEL20CS06S1286100	sgupta9973@gmail.	Civil Engineering	1	19C61	100
8	Vikash Kumar	Hydraulic Engineering	NPTEL20CE30S1363814	siwan841203@gma	Civil Engineering	3	17C32	80
9	Ragani Kumari	Geotechnical Engineering - 1	NPTEL20CE25S1580904	raggu46@gmail.com	Civil Engineering	3	17C60	98
10	Amarjeet Kumar	oblem solving through Programming In	NPTEL20CS06S1288205	jeetkr23034@gmail	Civil Engineering	1	19C06	99
11	Divya Kumari	Enhancing Soft Skills and Personality	NPTEL20HS10S1180282	ivyarxl56@gmail.co	Civil Engineering	2	18C23	99
12	Gautam Kumar Gupta	Soft Skill Development	NPTEL20HS16S1435698	autamtmh@gmail.co	Civil Engineering	2	18C24	96
13	Vishakha Bharti	Enhancing Soft Skills and Personality	NPTEL20HS10S1818777	akhabharti4@gmail.	Civil Engineering	2	18C60	100
14	Sandip Kumar	Enhancing Soft Skills and Personality	NPTEL20HS10S1726091	pkr03012000@gmai	Civil Engineering	2	18C45	99
15	Shweta Kashyap	Enhancing Soft Skills and Personality	NPTEL20HS10S1738358	akashyap1109@gma	Civil Engineering	2	18C49	100
16	Shreya	Enhancing Soft Skills and Personality	NPTEL20HS10S1057666	yasinha8985@gmail.	Civil Engineering	2	18C47	100
17	Nilotpal Kumar	Enhancing Soft Skills and Personality	NPTEL20HS10S1990535	lotpal414@gmail.co	Civil Engineering	2	18C28	99
18	Kundan Raj	Enhancing Soft Skills and Personality	NPTEL20HS10S1677290	undanrajstudy@gma	Civil Engineering	2	18C26	87
19	Vandana Kumari	Enhancing Soft Skills and Personality	NPTEL20HS10S1931150	vandnayadav@gmai	Civil Engineering	2	18c65	97
20	Pritam Raj	Enhancing Soft Skills and Personality	NPTEL20HS10S1372418	tam120910@gmail.c	Civil Engineering	2	18C34	99
21	Aman Kumar	Enhancing Soft Skills and Personality	NPTEL20HS10S1258401	mankr1616@gmail.c	Civil Engineering	2	19LEC03	79
22	Ritika	Enhancing Soft Skills and Personality	NPTEL20HS10S1489793	kumari08461@gmai	Civil Engineering	2	18C42	100
23	Raju Kumar	Enhancing Soft Skills and Personality	NPTEL20HS10S1653603	rraju1242000@gmai	Civil Engineering	2	18C40	100
24	Aditi Arya	Speaking Effectively	NPTEL20HS14S1061727	iarya12308@gmail.c	Civil Engineering	2	18C07	84
25	Avinash Kumar	Soft Skill Development	NPTEL20HS16S1690142	avinash202000@gma	Civil Engineering	2	18C18	98
26	Vinit Raj	Soft Skill Development	NPTEL20HS16S1403011	vraj538@gmail.com	Civil Engineering	2	18C59	97
27	Shivam Kumar	Soft Skill Development	NPTEL20HS16S1880410	amkmr079@gmail.c	Civil Engineering	2	18C46	93
28	Abhishek Kumar	Soft Skill Development	NPTEL20HS16S1464072	shek5122000@gmai	Civil Engineering	2	18C02	94
29	Rohit Raj	Soft Skill Development	NPTEL20HS16S1804023	nuroy12345@gmail.c	Civil Engineering	2	18C44	94
30	Abhishek Kumar	Soft Skill Development	NPTEL20HS16S1975776	shek.muz17@gmail.	Civil Engineering	2	18C05	97
31	Rahul Kumar	Soft Skill Development	NPTEL20HS16S1415558	alkr102014@gmail.c	Civil Engineering	2	18C37	95
32	Aditya Kumar	Soft Skill Development	NPTEL20HS16S1754232	singh004321@gmai	Civil Engineering	2	18C08	93
33	Nishant Ranjan	Soft Skill Development	NPTEL20HS16S1275803	ntranjan1248@gmai	Civil Engineering	2	18C29	91
34	Alok Kumar	Soft Skill Development	NPTEL20HS16S1718733	okbittu84@gmail.co	Civil Engineering	2	18C11	94
35	Akash Priyadarshi	Soft Skill Development	NPTEL20HS16S1492809	priyadarshi236@gma	Civil Engineering	2	18C10	96
36	Prince Kumar	Soft Skill Development	NPTEL20HS16S1428237	cumarkochas98@gm	Civil Engineering	2	18C33	95
37	Aaradhya Roy	Soft Skill Development	NPTEL20HS16S1550981	sandhya062@gmail.c	Civil Engineering	2	19LEC02	95
38	Aditya Kumar Gautam	Soft Skill Development	NPTEL20HS16S1309813	amaditya582@gmail	Civil Engineering	2	18C09	97
39	Md Nasir Alam	Soft Skill Development	NPTEL20HS16S1899491	siralam01998@gmai	Civil Engineering	2	18c27	92
40	Shwetank Kumar	Soft Skill Development	NPTEL20HS16S1095471	rswetank.mfp@gmai	Civil Engineering	2	18C50	95
41	Devesh Kumar Goit	Soft Skill Development	NPTEL20HS16S1327637	kumar703381@gma	Civil Engineering	2	18C22	93
42	Pappu Kumar	Soft Skill Development	NPTEL20HS16S1491966	pu15061999@gmail.	Civil Engineering	2	18C64	96
43	Ashutosh Kumar	Soft Skill Development	NPTEL20HS16S1961534	shutoah12134@gma	Civil Engineering	2	19LEC01	91
44	Anand Kumar Anand	Soft Skill Development	NPTEL20HS16S1545904	danand7654@gmail	Civil Engineering	2	18C13	97
45	Sonu Kumar Rajak	Soft Skill Development	NPTEL20HS16S1351639	nu140600@gmail.co	Civil Engineering	2	18C51	97
46	Rajesh Kumar Sharma	Soft Skill Development	NPTEL20HS16S1798078	umarsharma338@gm	Civil Engineering	2	18C39	94
47	Rohit Kumar	Soft Skill Development	NPTEL20HS16S1063253	hrirohit494@gmail.c	Civil Engineering	2	18C43	95
48	Abhinandan Kumar	Soft Skill Development	NPTEL20HS16S1134458	ndanimaliya25@gma	Civil Engineering	2	18C01	95
49	Chandan Kumar	Soft Skill Development	NPTEL20HS16S1916331	ankumar9521@gma	Civil Engineering	2	18C20	96
50	Sumit Shekhar	Soft Skill Development	NPTEL20HS16S1567991	shekhar0099@gmai	Civil Engineering	2	18C54	95
51	Ayush Aryan	Soft Skill Development	NPTEL20HS16S1983811	sharyan183@gmail.c	Civil Engineering	2	18C19	96
52	Krishna Kumar	Soft Skill Development	NPTEL20HS16S1728930	shna88017@gmail.c	Civil Engineering	2	18C25	95
53	Raman Kumar Saurav	Soft Skill Development	NPTEL20HS16S1588112	marsaurav2@gmail.c	Civil Engineering	2	18C41	98
54	Rishikesh Kumar	Soft Skill Development	NPTEL20HS16S1251218	kumar91556.nic@g	Civil Engineering	2	19LEC06	76
55	Rajeev Kumar Bharti	Soft Skill Development	NPTEL20HS16S1755046	hartirajeev@gmail.c	Civil Engineering	2	18C38	96
56	Ashwini Kumar	Soft Skill Development	NPTEL20HS16S1930927	ini03011999@gmail	Civil Engineering	2	18C17	96
57	Rahul Deo	Soft Skill Development	NPTEL20HS16S1449341	orahul784@gmail.co	Civil Engineering	2	18C36	96
58	Utkarsh Raj	Soft Skill Development	NPTEL20HS16S1787538	utkarsh093@gmail.c	Civil Engineering	2	18C57	97
59	Subhay Kumar	Soft Skill Development	NPTEL20HS16S1388102	ay9097kumar@gmai	Civil Engineering	2	18C52	94
60	Adarsh Kumar	Soft Skill Development	NPTEL20HS16S1448747	shkmukhiya@gmail.	Civil Engineering	2	18C06	94
61	Shubham Raj Anand	Soft Skill Development	NPTEL20HS16S1629549	ranand15@gmail.co	Civil Engineering	2	18C48	94
62	Tushi Kumari	Soft Skill Development	NPTEL20HS16S1905064	dharytushi50@gmail	Civil Engineering	2	18C56	97
63	Abhishek Kumar	Soft Skill Development	NPTEL20HS16S1513060	hek9709310@gmail	Civil Engineering	2	18C04	93
64	Vikash Kumar	Soft Skill Development	NPTEL20HS16S1858484	ashvk2316@gmail.c	Civil Engineering	2	18C58	94
65	Nitish Kumar	Soft Skill Development	NPTEL20HS16S1402496	hnitish9525@gmail.	Civil Engineering	2	18C30	98
66	Naveen Kumar	Human Behaviour	NPTEL20HS28S1422685	mngupt@gmail.com	Civil Engineering	2	18C63	68
67	Nilotpal Kumar	Introduction To Fluid Mechanics	NPTEL20ME22S1141658	lotpal414@gmail.co	Civil Engineering	2	18C28	99
68	Atibh Verma	oblem solving through Programming In	NPTEL20CS06S1345776	hvermadbg@gmail.c	Electrical Engineering	2	18E12	99
69	Raj Kamal	Principles of Signals and Systems	NPTEL20EE15S1974720	kamal1700@gmail.c	Electrical Engineering	3	17E15	49
70	Tamanna Choudhary	Electrical Machines - II	NPTEL20EE38S1372792	achoudhary919@gm	Electrical Engineering	3	17E37	90
71	Mahima Kumari	Signals and Systems	NPTEL20EE06S1756361	ahimakumari@gmail	Electrical Engineering	2	18E21	99
72	Sonali Kumari	Signals and Systems	NPTEL20EE06S1337761	nali801305@gmail.c	Electrical Engineering	2	18E56	100
73	Atibh Verma	Signals and Systems	NPTEL20EE06S1996474	hvermadbg@gmail.c	Electrical Engineering	2	18E12	99
74	Guddu Kumar Bahardar	Signals and Systems	NPTEL20EE06S1183479	guddukumar@gmai	Electrical Engineering	2	18E16	58
75	Sushil Kumar Pathak	Signals and Systems	NPTEL20EE06S1884960	umarpathak26@gma	Electrical Engineering	2	18e59	96
76	Mausam Kumari	Signals and Systems	NPTEL20EE06S1701329	samjha776@gmail.c	Electrical Engineering	2	18E25	97
77	Rajeev Anand	Signals and Systems	NPTEL20EE06S1486460	anand62116@gmai	Electrical Engineering	2	18E42	100
78	Ravishankar Kumar Sonu	Signals and Systems	NPTEL20EE06S1806844	karkumarsonu67@g	Electrical Engineering	2	18E46	99
79	Mausam Bharati	Signals and Systems	NPTEL20EE06S1846386	ambharati57@gmail	Electrical Engineering	2	18E24	100
80	Swati Kumari	Signals and Systems	NPTEL20EE06S1100294	ati765431@gmail.co	Electrical Engineering	2	18E61	97
81	Ritesh Raj	DC Power Transmission Systems	NPTEL20EE09S1317509	herajeev123@gmail.c	Electrical Engineering	4	16E07	94

82	Ritesh Raj	Electric Vehicles - Part 1	NPTEL20EE18S1983331	herajeev123@gmail.c	Electrical Engineering	4	16E07	92
83	Harsh Anand	Electric Vehicles - Part 1	NPTEL20EE18S1971908	anand557@gmail.co	Electrical Engineering	2	18E17	92
84	Saurav Kumar	Digital Electronic Circuits	NPTEL20EE32S1799706	auravk72@gmail.co	Electrical Engineering	2	18E50	73
85	Abhishek Raj Aman	oblem solving through Programming In	NPTEL20CS06S1681209	nabhishekraj@gmail	Electrical Engineering	2	18E02	92
86	Abhishek Raj Aman	Signals and Systems	NPTEL20EE06S1722369	nabhishekraj@gmail	Electrical Engineering	2	18E02	99
87	Abhishek Raj Aman	Electrical Machines - II	NPTEL20EE38S1434541	nabhishekraj@gmail	Electrical Engineering	2	18E02	100
88	Aditya Kumar Raushan	Electrical Machines - II	NPTEL20EE38S1728075	raushan05550@gma	Electrical Engineering	2	18E04	86
89	Rakesh Kumar	Electrical Machines - II	NPTEL20EE38S1930248	kumar1999@gmail.c	Electrical Engineering	2	18E43	99
90	Rajeev Anand	Electrical Machines - II	NPTEL20EE38S1527256	vanand62116@gmai	Electrical Engineering	2	18E42	99
91	Ajit Kumar	Signals and Systems	NPTEL20EE06S1132631	umar152201@gmail	Electrical Engineering	2	18E05	100
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94	Harsh Anand	Electrical Machines - II	NPTEL20EE38S1993126	anand557@gmail.co	Electrical Engineering	2	18E17	93
95	Ravishankar Kumar Sonu	Electrical Machines - II	NPTEL20EE38S1392833	karkumarsonu67@g	Electrical Engineering	2	18E46	100
96	Ajit Kumar	Electrical Machines - II	NPTEL20EE38S1456308	umar152201@gmail	Electrical Engineering	2	18E05	98
97	Mausam Bharati	Electrical Machines - II	NPTEL20EE38S1322980	ambharati57@gmail	Electrical Engineering	2	18E24	98
98	Praveen Kumar Gautam	Electrical Machines - II	NPTEL20EE38S1553147	engautam951@gmai	Electrical Engineering	2	18E37	85
99	Akanksha Kumari	oblem solving through Programming In	NPTEL20CS06S1140855	kumari999@gmail.c	Electrical Engineering	2	18E06	95
100	Akanksha Kumari	Signals and Systems	NPTEL20EE06S1575821	kumari999@gmail.c	Electrical Engineering	2	18E06	99
101	Swati Kumari	Electrical Machines - II	NPTEL20EE38S1150333	ati765431@gmail.co	Electrical Engineering	2	18E61	98
102	Akanksha Kumari	Electrical Machines - II	NPTEL20EE38S1326282	kumari999@gmail.c	Electrical Engineering	2	18E06	98
103	Anushka Kumari	Signals and Systems	NPTEL20EE06S1013974	ushka6514@gmail.co	Electrical Engineering	2	18E10	100
104	Yashwardhan	Electrical Machines - II	NPTEL20EE38S1548617	wardhan548@gmail	Electrical Engineering	2	18E62	93
105	Anushka Kumari	Introduction to probability and Statistics	NPTEL20MA22S1048248	ushka6514@gmail.co	Electrical Engineering	2	18E10	98
106	Dharnidhar Kumar	Soft Skill Development	NPTEL20HS16S1397939	tukumz.sspn@gmail	Electrical Engineering	2	18E14	91
107	Jitendra Kumar Sinha	Electrical Machines - II	NPTEL20EE38S1879579	akumarsinha95@gma	Electrical Engineering	2	18E18	100
108	Komal Deep	Electrical Machines - II	NPTEL20EE38S1615122	aldeep47011@gmail	Electrical Engineering	2	18E20	98
109	Manoranjan	Signals and Systems	NPTEL20EE06S1663460	malhafichak@gmail	Electrical Engineering	2	18E23	96
110	Manoranjan	Electric Vehicles - Part 1	NPTEL20EE18S1531520	malhafichak@gmail	Electrical Engineering	2	18E23	92
111	Manoranjan	Electrical Machines - II	NPTEL20EE38S1341399	malhafichak@gmail	Electrical Engineering	2	18E23	96
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114	Prabhu Kumar	Signals and Systems	NPTEL20EE06S1658796	bhu.kr26196@gmail.	Electrical Engineering	2	18E34	93
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117	Saurav Kumar	Signals and Systems	NPTEL20EE06S1296575	vparmar121@gmail	Electrical Engineering	2	18E51	97
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119	Saurav Kumar	Microprocessors And Microcontrollers	NPTEL20EE42S1933944	vparmar121@gmail	Electrical Engineering	2	18E51	94
120	Saurav Kumar	Speaking Effectively	NPTEL20HS14S1300390	vparmar121@gmail	Electrical Engineering	2	18E51	100
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124	Sumant Raj	Fundamentals of semiconductor devices	NPTEL20BT17S1737458	ntrajbedaulia@gmai	tronics and Communication Enginee	2	19(LE)EC07	82
125	Santosh Kumar Giri	Fundamentals of semiconductor devices	NPTEL20BT17S1746830	toshraj.nic@gmail.c	tronics and Communication Enginee	2	19LEEC02	79
126	Jivachh Kumar Ram	Fundamentals of semiconductor devices	NPTEL20BT17S1820994	achhku980@gmail.c	tronics and Communication Enginee	2	19LEEC01	67
127	Shubham Kumar	Fundamentals of semiconductor devices	NPTEL20BT17S1842046	mkumar51098@gma	tronics and Communication Enginee	2	18EC30	71
128	Jamil Akhtar	Fundamentals of semiconductor devices	NPTEL20BT17S1620731	nilakhtar1998@gma	tronics and Communication Enginee	2	18EC15	86
129	Md Mozammil Ansari	Fundamentals of semiconductor devices	NPTEL20BT17S1317603	odassirrr@gmail.co	tronics and Communication Enginee	2	18EC18	86
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132	Pragati Ranjan	oblem solving through Programming In	NPTEL20CS06S1622712	atiranjan999@gmail	tronics and Communication Enginee	1	19EC25	99
133	Anisha Kumari	oblem solving through Programming In	NPTEL20CS06S1742396	ha4pcckraj@gmail.c	tronics and Communication Enginee	2	18EC06	90
134	Saurav Suman	oblem solving through Programming In	NPTEL20CS06S1822879	rojjhamnr@gmail.co	tronics and Communication Enginee	1	19Ec29	99
135	Shubham Kumar	oblem solving through Programming In	NPTEL20CS06S1897333	mkumar32000@gma	tronics and Communication Enginee	1	19EC33	64
136	Shivam Kunal	oblem solving through Programming In	NPTEL20CS06S1731772	amkunal07@gmail.c	tronics and Communication Enginee	1	19EC31	99
137	Anushka Krishna	oblem solving through Programming In	NPTEL20CS06S1966368	aanushka137@gma	tronics and Communication Enginee	1	19EC07	99
138	Om Prakash	Programming in Java	NPTEL20CS08S1079263	akash8007@gmail.c	tronics and Communication Enginee	4	16EC34	97
139	Priyam Prakash	Programming in Java	NPTEL20CS08S1589069	mprakash99@gmail	tronics and Communication Enginee	2	18EC21	99
140	Om Prakash	Data Base Management System	NPTEL20CS09S1844274	akash8007@gmail.c	tronics and Communication Enginee	4	16EC34	83
141	Rohit Kumar	Deep Learning (IITKGP)	NPTEL20CS11S1548464	hit.mitian@gmail.co	tronics and Communication Enginee	2	17EC42	82
142	Bipul Kumar	Analog Circuits	NPTEL20EE24S1266094	u.mishra98@gmail.c	tronics and Communication Enginee	3	17EC10	62
143	Bipul Kumar	A brief introduction of Micro - Sensors	NPTEL20EE52S1679838	u.mishra98@gmail.c	tronics and Communication Enginee	3	17EC10	56
144	Akash Deep	Analog Circuits	NPTEL20EE24S1653204	shdeephjp6@gmail.c	tronics and Communication Enginee	3	17EC20	59
145	Akash Deep	A brief introduction of Micro - Sensors	NPTEL20EE52S1621238	shdeephjp6@gmail.c	tronics and Communication Enginee	3	17EC20	60
146	Nandan Kumar	Embedded System Design with ARM	NPTEL20CS15S1005950	anknightz002@gmai	tronics and Communication Enginee	3	17EC21	79
147	Nandan Kumar	Analog Circuits	NPTEL20EE24S1573290	anknightz002@gmai	tronics and Communication Enginee	3	17EC21	82
148	Dhiraj Kumar	Introduction To Programming Through	NPTEL20CS53S1244214	sharma884417@gma	tronics and Communication Enginee	2	18ec12	80
149	Om Prakash	oogle Cloud Computing Foundation Cou	NPTEL20CS55S1217552	akash8007@gmail.c	tronics and Communication Enginee	4	16EC34	92
150	Deepak Kumar	Signals and Systems	NPTEL20EE06S1294440	ckumar966176@gma	tronics and Communication Enginee	2	18EC10	91
151	Subhash Yadav	Signals and Systems	NPTEL20EE06S1946194	adav1996k@gmail.c	tronics and Communication Enginee	2	18EC32	94
152	Gaurav Kumar	Signals and Systems	NPTEL20EE06S1365845	rav.098muz@gmail.c	tronics and Communication Enginee	3	17EC22	63
153	Astitva Anand	Analog Circuits	NPTEL20EE24S1990088	tvanand74@gmail.c	tronics and Communication Enginee	3	17EC14	65
154	Shabab Anwer	Analog Circuits	NPTEL20EE24S1565076	hbanwer6788@gmail	tronics and Communication Enginee	3	17EC13	53
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157	Gaurav Kumar	Network Analysis	NPTEL20EE46S1445704	rav.098muz@gmail.c	tronics and Communication Enginee	3	17EC22	65
158	Puja Kumari	Network Analysis	NPTEL20EE46S1949123	ailpuja98@gmail.co	tronics and Communication Enginee	3	17EC29	65
159	Shabab Anwer	A brief introduction of Micro - Sensors	NPTEL20EE52S1784388	hbanwer6788@gmail	tronics and Communication Enginee	3	17EC13	63
160	Md Mozammil Ansari	Ethics in Engineering Practice	NPTEL20GE02S1661983	odassirrr@gmail.co	tronics and Communication Enginee	2	18EC18	87
161	Anamika Kumari	Ethics in Engineering Practice	NPTEL20GE02S1666399	rirakhi53052@gmai	tronics and Communication Enginee	2	19(LE)ECO3	83
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163	Abhishek Kumar	Ethics in Engineering Practice	NPTEL20GE02S1978751	hi852944@gmail.co	tronics and Communication Enginee	2	18EC03	83
164	Nikhil Kumar	Ethics in Engineering Practice	NPTEL20GE02S1283844	r9525348648@gma	tronics and Communication Enginee	2	18EC19	82

165	Jamil Akhtar	Ethics in Engineering Practice	NPTEL20GE02S1195961	nilakhtar1998@gma	tronics and Communication Enginee	2	18EC15	83
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171	Abhishek Kumar	Soft Skill Development	NPTEL20HS16S1568063	hekpatel5504@gmai	tronics and Communication Enginee	2	18EC02	97
172	Prakash Kumar	Soft Skill Development	NPTEL20HS16S1118017	visingh216@gmail.c	tronics and Communication Enginee	2	18EC38	98
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174	Aausaf Alam	Soft Skill Development	NPTEL20HS16S1758146	safalam585@gmail.c	tronics and Communication Enginee	2	18EC01	95
175	Amit Kumar	ab Programming for Numerical Comput	NPTEL20GE05S1593687	t.23052000@gmail.c	tronics and Communication Enginee	2	18EC04	51
176	Vivek Kumar Divyansh	Soft Skill Development	NPTEL20HS16S1589196	divyansh420@gmai	tronics and Communication Enginee	2	18EC34	91
177	Raushan Kumar	Soft Skill Development	NPTEL20HS16S1745053	hkumar241099@gma	tronics and Communication Enginee	2	18EC23	92
178	Vivek Kumar Singh	Soft Skill Development	NPTEL20HS16S1808641	kumarcs123@gmail	tronics and Communication Enginee	2	18EC35	96
179	Akash Raj	Soft Skill Development	NPTEL20HS16S1024581	ashraj280@gmail.co	tronics and Communication Enginee	2	18EC36	94
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211	Utkarsh Kumar	oblem solving through Programming In	NPTEL20CS06S1002012	6krutkarsh@gmail.c	Information Technology	1	19IT42	100
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213	Md Shad Alam	oblem solving through Programming In	NPTEL20CS06S1094414	alam150202@gmail	Information Technology	1	19IT22	99
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215	Atul Kumar Pandey	oblem solving through Programming In	NPTEL20CS06S1603322	pandeysphs@gmail.c	Information Technology	1	19IT12	100
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224	Purnima	Introduction to Machine Learning	NPTEL20CS29S1509918	rnimab064@gmail.c	Information Technology	2	19(LE)IT01	94
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230	Shubhangi Shreya	Introduction to Machine Learning	NPTEL20CS29S1251366	ngishreya11119@gm	Information Technology	2	18IT30	93
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238	Astha	Introduction to Machine Learning	NPTEL20CS29S1821943	tha.shri24@gmail.co	Information Technology	2	18IT06	81
239	Kumar Abhishek	Introduction to Machine Learning	NPTEL20CS29S1023881	hijha3820@gmail.co	Information Technology	2	18IT13	86
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250	Niraj Kumar	Python for Data Science	NPTEL20CS36S1389271	ajkumarb6@gmail.co	Information Technology	2	18IT17	85
251	Niraj Kumar	Data Analytics with Python	NPTEL20CS46S1124482	ajkumarb6@gmail.co	Information Technology	2	18IT17	95
252	Abhishek Kumar	Enhancing Soft Skills and Personality	NPTEL20HS10S1471794	kpabhi01@gmail.cor	Information Technology	2	18IT02	89
253	Abhishek Kumar	Introduction to Machine Learning	NPTEL20CS29S1775122	kkumar801104@gm	Information Technology	2	18IT01	87
254	Aniket Kumar Sinha	Introduction to Machine Learning	NPTEL20CS29S1534656	et13041990@gmail.	Information Technology	2	18IT04	86
255	Anjali Priya	Introduction to Machine Learning	NPTEL20CS29S1424327	li1508priya@gmail.c	Information Technology	2	18IT05	99
256	Jyoti Kumari	Data Base Management System	NPTEL20CS09S1913581	valjyoti2000@gmail.	Information Technology	2	18IT11	80
257	Jyoti Kumari	Introduction to Machine Learning	NPTEL20CS29S1363738	valjyoti2000@gmail.	Information Technology	2	18IT11	99
258	Jyoti Kumari	The Joy of Computing using Python	NPTEL20CS35S1831425	valjyoti2000@gmail.	Information Technology	2	18IT11	99
259	Sumit Paswan	Introduction to Machine Learning	NPTEL20CS29S1198325	tpaswan199@gmail.	Information Technology	2	18IT31	94
260	Sushmita	Introduction to Database Systems	NPTEL20CS03S1420439	nukhla5576@gmail.c	Information Technology	2	18IT33	90
261	Sushmita	Introduction to Machine Learning	NPTEL20CS29S1365881	nukhla5576@gmail.c	Information Technology	2	18IT33	96
262	Sushmita	Speaking Effectively	NPTEL20HS14S1700881	nukhla5576@gmail.c	Information Technology	2	18IT33	98
263	Sushmita	Soft Skill Development	NPTEL20HS16S1633978	nukhla5576@gmail.c	Information Technology	2	18IT33	95
264	Vishal Kumar	Introduction to Machine Learning	NPTEL20CS29S1235279	dkumar0354@gmail	Information Technology	2	18IT35	94
265	Ravi Shankar Jha	Introduction to Machine Learning	NPTEL20CS29S1407411	hankarjha14@gmail	Information Technology	2	18IT40	83
266	Abhinash Kumar	Introduction To Fluid Mechanics	NPTEL20ME22S1242034	banty855@gmail.co	Leather Technology	2	16LT12	86
267	Vinay Kumar Singh	Introduction To Fluid Mechanics	NPTEL20ME22S1187424	y12143singh@gmail	Leather Technology	2	18LT09	79
268	Ravi Raj	Introduction To Fluid Mechanics	NPTEL20ME22S1797287	viraj0884@gmail.co	Leather Technology	2	18LT08	82
269	Prince Kumar	Introduction To Fluid Mechanics	NPTEL20ME22S1172035	nghrajpoot2504@gn	Leather Technology	2	18LT05	76
270	Harsh Raj	Introduction To Fluid Mechanics	NPTEL20ME22S1427817	rshrajlm10@gmail.c	Leather Technology	2	18LT04	70
271	Nawlesh Kumar	Ethics in Engineering Practice	NPTEL20GE02S1273362	wlesh2k16@gmail.c	Mechanical Engineering	4	16M05	97
272	Nawlesh Kumar	Emotional Intelligence	NPTEL20HS13S1288094	wlesh2k16@gmail.c	Mechanical Engineering	4	16M05	99
273	Nawlesh Kumar	loyment Communication A Lab based c	NPTEL20HS15S1492265	wlesh2k16@gmail.c	Mechanical Engineering	4	16M05	96
274	Nawlesh Kumar	Product Design and Manufacturing	NPTEL20ME12S1440274	wlesh2k16@gmail.c	Mechanical Engineering	4	16M05	100
275	Nawlesh Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1317509	wlesh2k16@gmail.c	Mechanical Engineering	4	16M05	100
276	Nawlesh Kumar	Production and Operation Management	NPTEL20MG06S1284924	wlesh2k16@gmail.c	Mechanical Engineering	4	16M05	94
277	Shivam Sagar	Thermodynamics	NPTEL20CE27S1247468	amsagar893@gmail.	Mechanical Engineering	3	17M33	84
278	Md Amaan	oblem solving through Programming In	NPTEL20CS06S1674565	amaan0508@gmail.c	Mechanical Engineering	1	19M32	50
279	Dheeraj Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1749477	aj.focus2015@gmai	Mechanical Engineering	3	17M05	100
280	Dheeraj Kumar	Mechanics of Machining	NPTEL20ME41S1733198	aj.focus2015@gmai	Mechanical Engineering	3	17M05	90
281	Himanshu Kumar	Production and Operation Management	NPTEL20MG06S1226623	nshu2k17mit@gmail	Mechanical Engineering	3	17M16	80
282	Aniket Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1001986	etkumar2921@gmail	Mechanical Engineering	3	17M17	100
283	Abhimanyu Kumar	Speaking Effectively	NPTEL20HS14S1251729	nyu9572308928@gn	Mechanical Engineering	3	17M24	97
284	Om Prakash	The Joy of Computing using Python	NPTEL20CS35S1050487	akashshady99@gmai	Mechanical Engineering	2	18M25	96
285	Abhimanyu Kumar	Product Design and Manufacturing	NPTEL20ME12S1436409	nyu9572308928@gn	Mechanical Engineering	3	17M24	100
286	Shatrunjay Kumar	Fundamentals of Automotive Systems	NPTEL20DE06S1248865	mjaykumar69@gmai	Mechanical Engineering	3	17M52	84
287	Abhimanyu Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1033061	nyu9572308928@gn	Mechanical Engineering	3	17M24	100
288	Abhimanyu Kumar	Operations Management	NPTEL20ME30S1189668	nyu9572308928@gn	Mechanical Engineering	3	17M24	100
289	Anjali Gupta	ection and Quality Control in Manufactu	NPTEL20ME27S1479410	ligupta0207@gmail.	Mechanical Engineering	3	17M27	100
290	Ajit Kumar	Thermodynamics	NPTEL20CE27S1284988	itkmr505@gmail.co	Mechanical Engineering	3	17M30	84
291	Ajit Kumar	Manufacturing Process Technology I & I	NPTEL20ME14S1585100	itkmr505@gmail.co	Mechanical Engineering	3	17M30	99
292	Santosh Kumar	Laws of Thermodynamics	NPTEL20ME20S1243838	nt17m37@gmail.co	Mechanical Engineering	3	17M37	91
293	Mohit Raj	ection and Quality Control in Manufactu	NPTEL20ME27S1356160	mohi1998@gmail.co	Mechanical Engineering	3	17M63	100
294	Mohit Raj	Principles of Casting Technology	NPTEL20ME35S1754765	mohi1998@gmail.co	Mechanical Engineering	3	17M63	98
295	Anilesh Kumar	Product Design and Manufacturing	NPTEL20ME12S1548759	ileshk211@gmail.co	Mechanical Engineering	3	18 LE m07	100
296	Anilesh Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1871381	ileshk211@gmail.co	Mechanical Engineering	3	18 LE m07	98
297	Subhash Kumar	Manufacturing Process Technology I & I	NPTEL20ME14S1935332	umar.subhash@gma	Mechanical Engineering	3	18(LE)M01	100
298	Subhash Kumar	Laws of Thermodynamics	NPTEL20ME20S1883519	umar.subhash@gma	Mechanical Engineering	3	18(LE)M01	100
299	Subhash Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1025485	umar.subhash@gma	Mechanical Engineering	3	18(LE)M01	100
300	Subhash Kumar	Mechanics of Machining	NPTEL20ME41S1532752	umar.subhash@gma	Mechanical Engineering	3	18(LE)M01	92
301	Shadab Ali	A brief introduction of Micro - Sensors	NPTEL20EE52S1796895	labali34772@gmail.	Mechanical Engineering	2	18M43	92
302	Mukesh Kumar Roy	Introduction to Research	NPTEL20GE04S1649201	kroy3696@gmail.co	Mechanical Engineering	1	19MT06	85
303	Raj Kamal	Introduction to Research	NPTEL20GE04S1331535	alsingh090597@gma	Mechanical Engineering	1	19MT05	82
304	Nitish Kumar	Introduction to Research	NPTEL20GE04S1139144	tishmaths75@yahoo.	Mechanical Engineering	1	19MT07	87
305	Anmol	Introduction to Research	NPTEL20GE04S1446110	nolkaur784@gmail.c	Mechanical Engineering	1	19MM07	82
306	Pratyush Chandra	Effective Writing	NPTEL20HS06S1443878	rapratyush10@gmai	Mechanical Engineering	3	17M15	90
307	Abhishek Kumar	loyment Communication A Lab based c	NPTEL20HS15S1946503	k392542@gmail.cor	Mechanical Engineering	4	16M03	93
308	Vicky Kumar	Multivariable calculus	NPTEL20MA15S1901588	kumar252001@gmai	Mechanical Engineering	1	19M54	73
309	Abhishek Kumar	Product Design and Manufacturing	NPTEL20ME12S1436556	k392542@gmail.cor	Mechanical Engineering	4	16M03	100
310	Veer Kumar	ing ProcessesUltrasonic, Abrasive Jet a	NPTEL20ME17S1472907	er7870055@gmail.co	Mechanical Engineering	3	17M35	40
311	Pratyush Chandra	Laws of Thermodynamics	NPTEL20ME20S1741110	rapratyush10@gmai	Mechanical Engineering	3	17M15	87
312	Anurag Anand	Introduction To Fluid Mechanics	NPTEL20ME22S1014031	k365365@gmail.cor	Mechanical Engineering	2	18M09	92
313	Sumeet Kumar	Introduction To Fluid Mechanics	NPTEL20ME22S1299072	9255302@gmail.co	Mechanical Engineering	2	18M50	96
314	Sumit Kumar	Introduction To Fluid Mechanics	NPTEL20ME22S1460895	srivastava922@gmai	Mechanical Engineering	2	18M52	100
315	Gaurav Kumar	Introduction To Fluid Mechanics	NPTEL20ME22S1148322	avknov2017@gmail	Mechanical Engineering	2	18M19	88
316	Rahul Raj	amental of Welding Science and Techn	NPTEL20ME23S1055071	rraj2071@gmail.com	Mechanical Engineering	2	18M33	93
317	Vikas Kumar	amental of Welding Science and Techn	NPTEL20ME23S1594398	rvikas101299@gmai	Mechanical Engineering	2	18M58	100
318	Dhiraj Kumar Singh	amental of Welding Science and Techn	NPTEL20ME23S1388353	9570151721@gmai	Mechanical Engineering	2	19LeM04	100
319	Surya Kiran	amental of Welding Science and Techn	NPTEL20ME23S1924874	rakiran1608@gmail.c	Mechanical Engineering	2	19LEM02	98
320	Suraj Kumar	amental of Welding Science and Techn	NPTEL20ME23S1012978	rajmit9155@gmail.co	Mechanical Engineering	2	18M55	100
321	Abdul Jabbar	amental of Welding Science and Techn	NPTEL20ME23S1158591	bbar8579967751@gr	Mechanical Engineering	2	18M01	100
322	Prabhat Kumar	amental of Welding Science and Techn	NPTEL20ME23S1541408	atkumar46152@gma	Mechanical Engineering	2	18M28	100
323	Ankush Kumar	amental of Welding Science and Techn	NPTEL20ME23S1694223	hkumar31099@gma	Mechanical Engineering	2	18M08	100
324	Shadab Ali	amental of Welding Science and Techn	NPTEL20ME23S1235700	labali34772@gmail.	Mechanical Engineering	2	18M43	100
325	Sudhanshu Ranjan	amental of Welding Science and Techn	NPTEL20ME23S1166857	shuranjan106@gma	Mechanical Engineering	2	18M48	98
326	Ayush Vats	amental of Welding Science and Techn	NPTEL20ME23S1980686	shvats2015@gmail.c	Mechanical Engineering	2	18M13	82
327	Shashikant Rupin	amental of Welding Science and Techn	NPTEL20ME23S1768178	kantrupin123@gma	Mechanical Engineering	2	18M45	65
328	Avinash Kumar	amental of Welding Science and Techn	NPTEL20ME23S1754343	nashkr843@gmail.co	Mechanical Engineering	2	18M12	100
329	Om Prakash	amental of Welding Science and Techn	NPTEL20ME23S1942180	akashshady99@gmai	Mechanical Engineering	2	18M25	100
330	Sujit Tiwari	amental of Welding Science and Techn	NPTEL20ME23S1953999	warinainijore@gmai	Mechanical Engineering	2	18M49	100

331	Naveen Kumar	amental of Welding Science and Techn	NPTEL20ME23S1521683	een906026@gmail.c	Mechanical Engineering	2	18M23	98
332	Dheeraj Kumar	amental of Welding Science and Techn	NPTEL20ME23S1882077	kumar9022001@gm	Mechanical Engineering	2	19LEM07	98
333	Khushbu Rani Sikka	amental of Welding Science and Techn	NPTEL20ME23S1113393	uranisikka837@gma	Mechanical Engineering	2	19(l.e)m01	95
334	Sumeet Kumar	amental of Welding Science and Techn	NPTEL20ME23S1943516	9255302@gmail.co	Mechanical Engineering	2	18M50	100
335	Gaurav Kumar	amental of Welding Science and Techn	NPTEL20ME23S1264259	avknov2017@gmail	Mechanical Engineering	2	18M19	97
336	Madan Kumar Das	amental of Welding Science and Techn	NPTEL20ME23S1078459	kumar847409@gma	Mechanical Engineering	2	18m20	93
337	Sumit Kumar	amental of Welding Science and Techn	NPTEL20ME23S1659435	sumit4kr@gmail.con	Mechanical Engineering	2	19LEM06	100
338	Rahul Kumar	amental of Welding Science and Techn	NPTEL20ME23S1568420	umar19981225@gma	Mechanical Engineering	2	18M32	98
339	Yashshvi Kumar Singh	amental of Welding Science and Techn	NPTEL20ME23S1197542	vikumarsingh@gma	Mechanical Engineering	2	18M60	100
340	Abhay Kumar Jaiswal	amental of Welding Science and Techn	NPTEL20ME23S1828334	wal845101@gmail.c	Mechanical Engineering	2	18M02	100
341	Ashutosh Ranjan	amental of Welding Science and Techn	NPTEL20ME23S1533021	01012000@gmail.co	Mechanical Engineering	2	18M11	100
342	Yeshwant Singh	amental of Welding Science and Techn	NPTEL20ME23S1989513	antsingh2000@gma	Mechanical Engineering	2	18M61	98
343	Anurag Anand	amental of Welding Science and Techn	NPTEL20ME23S1125734	k365365@gmail.com	Mechanical Engineering	2	18M09	100
344	Ravish Kumar	amental of Welding Science and Techn	NPTEL20ME23S1919738	hkumar8229@gmail	Mechanical Engineering	2	19LEM03	100
345	Ashutosh Kumar	amental of Welding Science and Techn	NPTEL20ME23S1949662	haripiyush@gmail.c	Mechanical Engineering	2	18M10	100
346	Bablu Kumar	amental of Welding Science and Techn	NPTEL20ME23S1953767	blukmr26@gmail.co	Mechanical Engineering	2	18M14	100
347	Rinki Rani	amental of Welding Science and Techn	NPTEL20ME23S1416522	rani170999@gmail.	Mechanical Engineering	2	18M41	100
348	Anima Sharma	amental of Welding Science and Techn	NPTEL20ME23S1157202	asharma0149@gmai	Mechanical Engineering	2	19(LE)M05	98
349	Ranjan Kumar	amental of Welding Science and Techn	NPTEL20ME23S1355924	nmehtacool@gmail.	Mechanical Engineering	2	18M39	100
350	Ajit Kumar Paswan	amental of Welding Science and Techn	NPTEL20ME23S1600604	umarjh1234@gmail.	Mechanical Engineering	2	18M06	97
351	Sonu Kumar	amental of Welding Science and Techn	NPTEL20ME23S1705045	onuraj9798@gmail.c	Mechanical Engineering	2	18M46	100
352	Pankaj Kumar	amental of Welding Science and Techn	NPTEL20ME23S1989227	kraj0842@gmail.com	Mechanical Engineering	2	18M26	60
353	Sumeet Ranjan	amental of Welding Science and Techn	NPTEL20ME23S1657281	eetranjan2k1@gmail	Mechanical Engineering	2	18M51	100
354	Viket Saurabh	amental of Welding Science and Techn	NPTEL20ME23S1917205	k223085@gmail.com	Mechanical Engineering	2	18M59	98
355	Aditya Raj	amental of Welding Science and Techn	NPTEL20ME23S1382480	yarajnvs304@gmail.	Mechanical Engineering	2	18M05	100
356	Sumit Kumar	amental of Welding Science and Techn	NPTEL20ME23S1162680	srivastava922@gmai	Mechanical Engineering	2	18M52	100
357	Abhishek Kumar Sharma	amental of Welding Science and Techn	NPTEL20ME23S1525537	hwag1234567@gma	Mechanical Engineering	2	18M04	100
358	Md Haidar Ali	amental of Welding Science and Techn	NPTEL20ME23S1995357	rindian9956@gmail	Mechanical Engineering	2	18M22	100
359	Abhishek Gupta	amental of Welding Science and Techn	NPTEL20ME23S1216982	kgupta7161968@gm	Mechanical Engineering	2	18M03	100
360	Nitish Kumar Jha	amental of Welding Science and Techn	NPTEL20ME23S1215968	873664938@gmail.c	Mechanical Engineering	2	18M24	98
361	Chandan Kumar Yadav	amental of Welding Science and Techn	NPTEL20ME23S1313797	ndan845453@gmail.	Mechanical Engineering	2	18M17	100
362	Abhinav	amental of Welding Science and Techn	NPTEL20ME23S1189259	navanandlali@gmail	Mechanical Engineering	2	18M62	100
363	Ayushi Divya	on to Abrasive Machining and Finishing	NPTEL20ME24S1881151	hidivya1999@gmail	Mechanical Engineering	3	17M40	80
364	Ravi Ranjan Kumar	Automatic Control	NPTEL20ME25S1205008	jan.solenoid@gmail.	Mechanical Engineering	2	1-3511920447	59
365	Sumit Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1769750	srivastava922@gmai	Mechanical Engineering	2	18M52	100
366	Rohit Ranjan	ection and Quality Control in Manufactu	NPTEL20ME27S1541238	tranjan5618@gmail.	Mechanical Engineering	3	17M59	100
367	Ganesh Kumar Sah	amental of Welding Science and Techn	NPTEL20ME23S1170000	ksah8541@gmail.co	Mechanical Engineering	2	18M18	93
368	Pritam Kumar	amental of Welding Science and Techn	NPTEL20ME23S1176035	nkumar2252@gmail	Mechanical Engineering	2	18M29	98
369	Salif Khan	ection and Quality Control in Manufactu	NPTEL20ME27S1857820	saliff007@gmail.com	Mechanical Engineering	3	17M57	100
370	Ragini Kumari	amental of Welding Science and Techn	NPTEL20ME23S1311195	maragini219@gmail.	Mechanical Engineering	2	18M30	100
371	Rahul Ranjan	amental of Welding Science and Techn	NPTEL20ME23S1224976	ul16ranjan@gmail.c	Mechanical Engineering	2	18M34	97
372	Raj Shree	Introduction To Fluid Mechanics	NPTEL20ME22S1342768	ree3082001@gmail.	Mechanical Engineering	2	18M36	86
373	Randhir Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1480446	andhirkumar@gmail	Mechanical Engineering	3	18(LE)M06	100
374	Raj Shree	amental of Welding Science and Techn	NPTEL20ME23S1211911	ree3082001@gmail.	Mechanical Engineering	2	18M36	100
375	Raj Shekhar	amental of Welding Science and Techn	NPTEL20ME23S1634213	rajshekhar@gmail.c	Mechanical Engineering	2	18M37	92
376	Ajay Kumar	ection and Quality Control in Manufactu	NPTEL20ME27S1126619	ajaykrr658@gmail.co	Mechanical Engineering	3	17M28	100
377	Ramakar Thakur	Introduction To Fluid Mechanics	NPTEL20ME22S1399505	kkarthakur57@gmail	Mechanical Engineering	2	18M38	89
378	Md Hasnain Aazam	Steam and Gas Power Systems	NPTEL20ME33S1233633	zam08322@gmail.co	Mechanical Engineering	2	18MT08	75
379	Ramakar Thakur	amental of Welding Science and Techn	NPTEL20ME23S1760374	kkarthakur57@gmail	Mechanical Engineering	2	18M38	100
380	Veer Kumar	Principles of Casting Technology	NPTEL20ME35S1809059	er7870055@gmail.co	Mechanical Engineering	3	17M35	98
381	Raj Kishor Gupta	Principles of Casting Technology	NPTEL20ME35S1958800	5861712raj@gmail.c	Mechanical Engineering	2	18M35	100
382	Shahid Afroz	amental of Welding Science and Techn	NPTEL20ME23S1922115	hidafroz59@gmail.c	Mechanical Engineering	2	18M44	97
383	Subhash Kumar	amental of Welding Science and Techn	NPTEL20ME23S1656841	sh7272kumar@gmai	Mechanical Engineering	2	18M47	100
384	Suprity Kumari	amental of Welding Science and Techn	NPTEL20ME23S1501403	suprity116@gmail.c	Mechanical Engineering	2	18M54	100
385	Tej Pratap	amental of Welding Science and Techn	NPTEL20ME23S1054445	pratap053@gmail.co	Mechanical Engineering	2	18M56	100
386	Sumeet Kumar	Materials Science and Engineering	NPTEL20MM09S1268043	9255302@gmail.co	Mechanical Engineering	2	18M50	87
387	Sumit Kumar	Materials Science and Engineering	NPTEL20MM09S1502095	srivastava922@gmai	Mechanical Engineering	2	18M52	98

Annexure 10.1 b							
S. No.	**Name**	**Course Name**	**Roll Number**	**Email Id**	**Department**	**Assignment score out of 100**	**Eligible for modified pass certificate**
1	Vikash Kumar	Geomorphology	NPTEL20CE28S1259384	vikashkumar@mitmuzaffarpur.org	Applied Science & Humanities	98	Yes
2	Dr. Kumari Shail Bala	Enhancing Soft Skills and Personality	NPTEL20HS10S1073994	shail.bala82@gmail.com	Applied Science & Humanities	83	Yes
3	Swatantra Kumar Tiwari	Quantum Mechanics I	NPTEL20PH05S1899011	sktskyrace@gmail.com	Applied Science & Humanities	84	Yes
4	Swatantra Kumar Tiwari	Electromagnetism	NPTEL20PH08S1339263	sktskyrace@gmail.com	Applied Science & Humanities	100	Yes
5	Sushila Sharma	Modern Construction Materials	NPTEL20CE05S1852320	sushilasharma25@gmail.com	Civil Engineering	95	Yes
6	Vijay Kumar	Earthquake Geology:A tool for Seismic Hazard Assessment	NPTEL20CE19S1745054	vijayfce@mitmuzaffarpur.org	Civil Engineering	79	Yes
7	Sushila Sharma	Maintenance and Repair of Concrete Structures	NPTEL20CE26S1770451	sushilasharma25@gmail.com	Civil Engineering	87	Yes
8	Pranav Kumar	Matlab Programming for Numerical Computation	NPTEL20GE05S1001757	pranav.kumar52@gmail.com	Civil Engineering	79	Yes
9	Jagada Nand Jha	BA Accreditation and Teaching - Learning in Engineering (NAT	NPTEL20GE11S1311579	jagadanand@gmail.com	Civil Engineering	86	Yes
10	Santosh Kumar	Manufacturing Process Technology I & II	NPTEL20ME14S1711368	connecto.santosh@gmail.com	Civil Engineering	88	Yes
11	Santosh Kumar	Metal Cutting And Machine Tools	NPTEL20ME16S1770714	connecto.santosh@gmail.com	Civil Engineering	67	Yes
12	Santosh Kumar	Failure analysis and Prevention	NPTEL20ME26S1094791	connecto.santosh@gmail.com	Civil Engineering	87	Yes
13	Pawan Kumar Jaiswal	Transmission lines and electromagnetic waves	NPTEL20EE04S1822443	pawanjaiswal@mitmuzaffarpur.org	ronics and Communication Engine	88	Yes
14	Rakesh Kumar	Transmission lines and electromagnetic waves	NPTEL20EE04S1859123	rakeshec@mitmuzaffarpur.org	ronics and Communication Engine	46	Yes
15	Shadab Rabbani	Signals and Systems	NPTEL20EE06S1395635	shadabrabbani2008@gmail.com	ronics and Communication Engine	97	Yes
16	Saket Kumar	Microwave Integrated Circuits	NPTEL20EE25S1772343	sgsaket1@gmail.com	ronics and Communication Engine	63	Yes
17	Rakesh Kumar	Microwave Integrated Circuits	NPTEL20EE25S1708710	rakeshec@mitmuzaffarpur.org	ronics and Communication Engine	89	Yes
18	Shadab Rabbani	Microwave Integrated Circuits	NPTEL20EE25S1436788	shadabrabbani2008@gmail.com	ronics and Communication Engine	69	Yes
19	Ajay Kumar	Digital Electronic Circuits	NPTEL20EE32S1629496	ajay.28.kumar@gmail.com	ronics and Communication Engine	91	Yes
20	Umar Farooque	Digital Electronic Circuits	NPTEL20EE32S1292046	ufarooque.mit@gmail.com	ronics and Communication Engine	64	Yes
21	Pawan Kumar Jaiswal	Mathematical Methods and Techniques in Signal Processing	NPTEL20EE51S1896236	pawanjaiswal@mitmuzaffarpur.org	ronics and Communication Engine	45	Yes
22	Vijay Kumar	Bio-Informatics : Algorithms and Applications	NPTEL20BT10S1454933	vijay@mitmuzaffarpur.org	Information Technology	63	Yes
23	Ashish Kumar	Cloud computing	NPTEL20CS20S1632382	shish.ashish@gmail.com	Information Technology	95	Yes
24	Ashish Kumar	Computer Networks and Internet Protocol	NPTEL20CS23S1179818	shish.ashish@gmail.com	Information Technology	89	Yes
25	Vijay Kumar	Social Networks	NPTEL20CS32S1709820	vijay@mitmuzaffarpur.org	Information Technology	86	Yes
26	Vijay Kumar	The Joy of Computing using Python	NPTEL20CS35S1285320	vijay@mitmuzaffarpur.org	Information Technology	75	Yes
27	Manikant Kumar	Electronic Waste Management - Issues And Challenges	NPTEL20CE12S1385669	manikantfddi@gmail.com	Leather Technology	96	Yes
28	Arati Kumari	Water Supply Engineering	NPTEL20CE23S1617974	aratimit283@gmail.com	Leather Technology	73	Yes
29	Mithilesh Kumar Rai	Environmental Quality Monitoring & Analysis	NPTEL20CH01S1716638	mkrailt@mitmuzaffarpur.org	Leather Technology	73	Yes
30	Manikant Kumar	Environmental Quality Monitoring & Analysis	NPTEL20CH01S1961732	manikantfddi@gmail.com	Leather Technology	80	Yes
31	Ankit Kumar	Introduction to Research	NPTEL20GE04S1371557	ankitkr606@mitmuzaffarpur.org	Mechanical Engineering	82	Yes
32	Amit Kumar	Matlab Programming for Numerical Computation	NPTEL20GE05S1111027	tiwaryamit25@gmail.com	Mechanical Engineering	63	Yes
33	Ankit Kumar	Non-Conventional Energy Resources	NPTEL20GE06S1036721	ankitkr606@mitmuzaffarpur.org	Mechanical Engineering	61	Yes
34	Amit Kumar	Foundations of Computational Materials Modelling	NPTEL20ME08S1323165	tiwaryamit25@gmail.com	Mechanical Engineering	49	Yes
35	Hemant Kumar Choudhary	Materials Science and Engineering	NPTEL20MM09S1254227	hemant@mitmuzaffarpur.org	Mechanical Engineering	86	Yes

Annexure-10.2 a

Muzaffarpur Institute of Technology, Muzaffarpur

Learners of Various Courses from Coursera (Apr - Aug 2020)

S. No.	Full Name	Email	External ID (Reg. No.)	# Completions (No. of Courses)	Batch	Branch
1	Rahul Kumar Sinha	sinharahul220@gmail.com	17106107010	89	2017	IT
2	Saubhik Kumar Mahto	saubhikgolu@gmail.com	17102107005	53	2017	ME
3	Ashwini Kumar	ashwini030199@gmail.com	18101107023	51	2018	CE
4	Raju Kumar	kumarraju1242000@gmail.com	18101107043	36	2018	CE
5	Prince Kumar	prince95849@gmail.com	19106107039	36	2019	IT
6	Anupam Singh	rajputboyanupam2211@gmail.com	17106107014	32	2017	IT
7	Shreya	shreyasinha8985@gmail.com	18101107050	28	2018	CE
8	Anurag Gupta	yours148@gmail.com	17106107016	26	2017	IT
9	Chandan Kumar Pathak	chandankumarpathak89@gmail.com	19106107012	24	2019	IT
10	Shantanu Kumar	shantanu4216@gmail.com	17106107019	22	2017	IT
11	Subhash Kumar	subhash7272kumar@gmail.com	18102107041	22	2018	ME
12	Ayushman	ayushmansingh2010@gmail.com	16106107033	21	2016	IT
13	Shubham Kumar	shubham2603kumar@gmail.com	17106107017	20	2017	IT
14	Pritam Raj	pritam120910@gmail.com	18101107038	20	2018	CE
15	Avinash Kumar	kumaravinash202000@gmail.com	18101107025	18	2018	CE
16	Utpal Kant	utpalkant7050@gmail.com	17103107018	16	2017	EE
17	Vishakha Bharti	vishakhabharti4@gmail.com	18101107006	16	2018	CE
18	Akash Raj	akashraj280@gmail.com	18104107027	16	2018	EC
19	Prince Raj	meeprince1657@gmail.com	18106107906	16	2017	IT
20	Nirbhay Kumar Pandey	nirbhaypandey019@gmail.com	17104107033	15	2017	EC
21	Naveen Kumar	nmngupt@gmail.com	18101107007	15	2018	CE
22	Anjali Priya	anjali6216@gmail.com	18106107009	15	2018	IT
23	Riya Agrawal	drriyaagrawal1998@gmail.com	17106107001	14	2017	IT
24	Rahul Kumar	rahulkr102014@gmail.com	18101107040	14	2018	CE
25	Ravi Kumar	rkms393@gmail.com	18106107033	14	2018	IT
26	Kumar Shivam	kumar.shivam13021999@gmail.com	17106107042	13	2017	IT
27	Shwetank Kumar	kumarswetank.mfp@gmail.com	18101107053	13	2018	CE
28	Aparna Kumari	aparnakumariar246@gmail.com	16106107003	12	2016	IT
29	Deepa Kumari	chhotivatas@gmail.com	16106107026	12	2016	IT
30	Pratyasha Shree	pratyasha.shree@gmail.com	17106107003	12	2017	IT
31	Ankit Jha	ankit28jha@gmail.com	17106107004	12	2017	IT
32	Rahul Deo	deorahul784@gmail.com	18101107039	12	2018	CE
33	Ritika	ritikakumari08461@gmail.com	18101107045	12	2018	CE
34	Ravi Ranjan Kumar	r.ranjan.solenoid@gmail.com	18102107036	12	2018	ME
35	Ravishankar Kumar Sonu	ravishankarkumarsonu67@gmail.com	18103107044	12	2018	EE
36	Shivam Sagar	shivamsagar893@gmail.com	17102107033	11	2017	ME
37	Alok Kumar	alokmishra438@gmail.com	17106107009	11	2017	IT
38	Akanksha Kumari	akakumari999@gmail.com	18103107005	11	2018	EE
39	Sonali Kumari	sonali801305@gmail.com	18103107054	11	2018	EE
40	Shailendra Kumar Vishwakarma	shailendracse1998@gmail.com	18106107902	11	2017	IT
41	Prity Kumari	prityk702@gmail.com	18106107903	11	2017	IT

42	Pranay Mohan	mohanpranay22@gmail.com	16104107029	10	2016	EC
43	Sakshi Priya	sakshipriya2647@gmail.com	18103107046	10	2018	EE
44	Amit Kumar	amit.ishu23@gmail.com	18104107001	10	2018	EC
45	Priyam Prakash	priyamprakash99@gmail.com	18104107006	10	2018	EC
46	Saummya Singh	saumya.s0206@gmail.com	18104107025	10	2018	EC
47	Raja Babu	imrajastark@gmail.com	19106107025	10	2019	IT
48	Purnima	purnimab064@gmail.com	19106107901	10	2018	IT
49	Anurag Kumar Gupta	anuraggreat77@gmail.com	16106107022	9	2016	IT
50	Saurabh Mishra	shmishra933@gmail.com	16106107025	9	2016	IT
51	Sunny Saurav	sunnygotohell@gmail.com	17104107020	9	2017	EC
52	Vivek Kumar Divyansh	vivekdivyansh420@gmail.com	18104107031	9	2018	EC
53	Nisha	nisha.gwpmuz@gmail.com	18104107902	9	2017	EC
54	Sushmita	rkshukhla5576@gmail.com	18106107028	9	2018	IT
55	Abhishek Kumar Paswan	ka327058@gmail.com	19101107034	9	2019	CE
56	Ashish Arya	ashish18arya@gmail.com	19103107901	9	2018	EE
57	Anushka Krishna	krishnaanushka137@gmail.com	19104107012	9	2019	EC
58	Saurav Suman	sarojjhamnr@gmail.com	19104107026	9	2019	EC
59	Nirbhay Singh	nirbhaysinghbe1@gmail.com	19106107902	9	2018	IT
60	Kundan Kumar	kundankumar11121998@gmail.com	17101107033	8	2017	CE
61	Avinash Kumar	avinashkumar9199699342@gmail.com	17102107019	8	2017	ME
62	Nandan Kumar	nandankumar9498@gmail.com	17104107024	8	2017	EC
63	Supriya Kumari	supriyarajput1627@gmail.com	17104107043	8	2017	EC
64	Nilotpal Kumar	nilotpal414@gmail.com	18101107033	8	2018	CE
65	Richa Kumari	richasahukar22@gmail.com	18104107003	8	2018	EC
66	Vivek Kumar Singh	vivekkumarcs123@gmail.com	18104107026	8	2018	EC
67	Nishi Anand	nishianand08@gmail.com	16106107020	7	2016	IT
68	Amisha	amisha.14muz@gmail.com	16106107028	7	2016	IT
69	Aditya Kumar Thakur	adityathakur0641@gmail.com	17101107025	7	2017	CE
70	Veer Kumar	veer7870055@gmail.com	17102107031	7	2017	ME
71	Vidya Kumari	vidya.vidhi31@gmail.com	17103107004	7	2017	EE
72	Vanisha Sharma	vanisha.13sharma@gmail.com	17103107036	7	2017	EE
73	Ravi Kumar Singh	rs3047175@gmail.com	17104107002	7	2017	EC
74	Nivedita Kumari	niveditaprity@gmail.com	17106107034	7	2017	IT
75	Abhishek Aman	abhishekaman356@gmail.com	17107107010	7	2017	LT
76	Abhinav Kumar	abhinavkr2k18@gmail.com	18103107003	7	2018	EE
77	Priya Raj	priyaraj72001@gmail.com	18103107035	7	2018	EE
78	Hema Kumari	hemakumari62064@gmail.com	18104107013	7	2018	EC
79	Shristi Singh	shristisingh384@gmail.com	18106107025	7	2018	IT
80	Aman Ranjan Kumar Jha	amanajofficial7@gmail.com	19104107008	7	2019	EC
81	Ritesh Raj	riteshraj859@gmail.com	16103107057	6	2016	EE
82	Mamta Kumari	mamtakumaripcs84@gmail.com	16104107017	6	2016	EC
83	Puja Kumari	pujak4843@gmail.com	16104107039	6	2016	EC
84	Ruby Kumari	rubymit1234@gmail.com	16106107011	6	2016	IT
85	Aman Shrivastava	amanshrivastava733@gmail.com	16107107005	6	2016	LT

86	Aparna Rani	aparna.1998sen05@gmail.com	17104107016	6	2017	EC
87	Supriya Bharti	supriyabhartibst1999@gmail.com	17104107017	6	2017	EC
88	Bipul Kumar	biyu.mishra98@gmail.com	17104107021	6	2017	EC
89	Prince Kumar	vcsrm.princekr002@gmail.com	17104107025	6	2017	EC
90	Shubham Kumar	subhamkumar2510@gmail.com	17106107029	6	2017	IT
91	Bablu Kumar	bablukmr26@gmail.com	18102107011	6	2018	ME
92	Prabhat Kumar	prabhatkumar46152@gmail.com	18102107026	6	2018	ME
93	Ragini Kumari	sharmaragini219@gmail.com	18102107028	6	2018	ME
94	Yashshvi Kumar Singh	yashshvikumarsingh@gmail.com	18102107052	6	2018	ME
95	Manoranjan	rajkamalhafichak@gmail.com	18103107021	6	2018	EE
96	Swati Kumari	swati765431@gmail.com	18103107059	6	2018	EE
97	Ravi Kant Halchal	rkanthalchal029@gmail.com	18104107007	6	2018	EC
98	Md.Sohail	md.sohail.mdb@gmail.com	18106107015	6	2018	IT
99	Vishnu Darshan Kumar	vishnudarshan5@gmail.com	18106107026	6	2018	IT
100	Shubhangi Shreya	shubhangishreya11119@gmail.com	18106107029	6	2018	IT
101	Gaurav Kumar	gauravkumar5107@gmail.com	19101107021	6	2019	CE
102	Shubham Kumar	shubhamsinghanya05@gmail.com	19101107051	6	2019	CE
103	Ankit Kumar	ankitrajpoot7070@gmail.com	19102107011	6	2019	ME
104	Richa Rachna	richarachna02richa@gmail.com	19103107054	6	2019	EE
105	Asadullah	galibasadullah480@gmail.com	19104107019	6	2019	EC
106	Arpit Anand	arpitanal1@gmail.com	19106107001	6	2019	IT
107	Saurabh Kumar Vigyananand	saurabhvigyananand@gmail.com	19106107904	6	2018	IT
108	Anmol Shrivastava	shrivastava199722@gmail.com	16104107012	5	2016	EC
109	Aditya Singh	aditya2407singh@gmail.com	16106107006	5	2016	IT
110	Md Nizamuddin	nizamuddin.co.in@gmail.com	16106107015	5	2016	IT
111	Shivangi	2129shivangi@gmail.com	17103107001	5	2017	EE
112	Surbhi Kumari	surbhikhg91@gmail.com	17106107028	5	2017	IT
113	Divya Kumari	divyarxl56@gmail.com	18101107028	5	2018	CE
114	Gautam Kumar Gupta	gautamtmh@gmail.com	18101107029	5	2018	CE
115	Rajeev Kumar Bharti	krbhartirajeev@gmail.com	18101107041	5	2018	CE
116	Shadab Ali	shadabali34772@gmail.com	18102107038	5	2018	ME
117	Tej Pratap	tejpratap053@gmail.com	18102107049	5	2018	ME
118	Abhishek Raj Aman	amanabhishekraj@gmail.com	18103107001	5	2018	EE
119	Manish Kumar	kumarmanish21025@gmail.com	18103107020	5	2018	EE
120	Nikhil Kumar	kumarnikhil7541@gmail.com	18104107012	5	2018	EC
121	Ayush Anand	anandayush0907@gmail.com	18104107020	5	2018	EC
122	Jyoti Kumari	jaiswaljyoti2000@gmail.com	18106107002	5	2018	IT
123	Niraj Kumar	nirajkumarb6@gmail.com	18106107016	5	2018	IT
124	Shekhar Kumar Sinha	shekharsinha970@gmail.com	18106107030	5	2018	IT
125	Amarjeet Kumar	amarjeetkr23034@gmail.com	19101107036	5	2019	CE
126	Aman Satyam	amansatyam18@gmail.com	19103107049	5	2019	EE
127	Prateek Kumar	prateekkumar1214@gmail.com	19106107024	5	2019	IT
128	Ravi Shankar	ravishankar800008@gmail.com	19106107026	5	2019	IT
129	Khadija	h100khadija@gmail.com	19106107903	5	2018	IT

130	Sanjay Kumar	sanjaykumar15160@gmail.com	16106107014	4	2016	IT
131	Himanshu Kumar	himanshu2k17mit@gmail.com	17102107001	4	2017	ME
132	Abhimanyu Kumar	abhimanyu9572308928@gmail.com	17102107014	4	2017	ME
133	Ajit Kumar	ajitkmr505@gmail.com	17102107026	4	2017	ME
134	Khushboo Anand	khushbooana56@gmail.com	17103107006	4	2017	EE
135	Neha Singh	nehasingh02015@gmail.com	17103107011	4	2017	EE
136	Priya Kumari	k.priya7545@gmail.com	17103107032	4	2017	EE
137	Preeti	singhpreeti5144@gmail.com	17106107005	4	2017	IT
138	Nitish Shrivastava	nitish9t7@gmail.com	17106107008	4	2017	IT
139	Apurva Singh	singhapurva42@gmail.com	17106107011	4	2017	IT
140	Ritesh Kumar	rk3174864@gmail.com	17106107013	4	2017	IT
141	Aman Saraff	aman19saraff97@gmail.com	17106107030	4	2017	IT
142	Navneet Kumar	jaiswalnavneet471@gmail.com	17106107036	4	2017	IT
143	Abhishek Kumar	ak353613@gmail.com	17106107038	4	2017	IT
144	Akanksha Anand	akanshashree92@gmail.com	17106107040	4	2017	IT
145	Sudhir Kumar Yadav	engg.sudhirkumar1998@gmail.com	18101107056	4	2018	CE
146	Abhijeet Kumar	abhijeetcivil27@gmail.com	18101107910	4	2017	CE
147	Sumit Kumar	sumitsrivastava922@gmail.com	18102107045	4	2018	ME
148	Harsh Anand	hanand557@gmail.com	18103107017	4	2018	EE
149	Suraj Kumar Rajak	surajkumarrajak1142@gmail.com	18103107056	4	2018	EE
150	Nilesh Kumar	nk3218761@gmail.com	18104107037	4	2018	EC
151	Abhishek Kumar	akpabhi01@gmail.com	18106107005	4	2018	IT
152	Nikita	nikitariya786@gmail.com	18106107014	4	2018	IT
153	Ravi Shankar Jha	ravishankarjha14@gmail.com	18106107018	4	2018	IT
154	Raviranjan Kumar	raviranjankumar0115@gmail.com	18106107022	4	2018	IT
155	Shubham Kumar Anand	shubhamprajapatitekari@gmail.com	19101107049	4	2019	CE
156	Aditya Kumar Mishra	adityabhaskar425@gmail.com	19102107004	4	2019	ME
157	Vicky Kumar	vickykumar252001@gmail.com	19102107043	4	2019	ME
158	Aman Kumar	16singhaman161@gmail.com	19102107902	4	2018	ME
159	Sumit Awasthi	thesumitawasthi@gmail.com	19104107029	4	2019	EC
160	Pragati Ranjan	pragatiranjan999@gmail.com	19104107040	4	2019	EC
161	Shivam Kunal	shivamkunal07@gmail.com	19104107041	4	2019	EC
162	Aniket Kumar	aniketraj098@gmail.com	19106107010	4	2019	IT
163	Md Tahammul Noor	noorali99307@gmail.com	19106107018	4	2019	IT
164	Nikhil Kumar Singh	singhnikhilkumar81@gmail.com	19106107019	4	2019	IT
165	Utkarsh Kumar	2016krutkarsh@gmail.com	19106107036	4	2019	IT
166	Beauty Kumari	kumaribeauty118@gmail.com	16106107010	3	2016	IT
167	Priya Bharti	pb1662681@gmail.com	16106107012	3	2016	IT
168	Anshuli Kumari	kumarianshuli.anshu@gmail.com	16106107013	3	2016	IT
169	Apoorva Rathore	apoorvarathore0806@gmail.com	16106107036	3	2016	IT
170	Prashant Kumar	prashantkumar25121998@gmail.com	17101107005	3	2017	CE
171	Pankaj Kumar	pankajkumar851850@gmail.com	17101107901	3	2016	CE
172	Pragya Kumari	jhapragyajha@gmail.com	17103107002	3	2017	EE
173	Aparna Singh	aparnasingh111999@gmail.com	17103107005	3	2017	EE

174	Vandana Bharti	vandanabharti753@gmail.com	17103107009	3	2017	EE
175	Sandhya Kumari	sandhyakumari11121998@gmail.com	17103107010	3	2017	EE
176	Niraj Kumar	nirajgaya777@gmail.com	17103107014	3	2017	EE
177	Abhinav Kishor	kishorabhinav7488@gmail.com	17103107016	3	2017	EE
178	Vikash Kumar	vikashkumar05386@gmail.com	17103107034	3	2017	EE
179	Rohit Kumar	rohitkumar7717769340@gmail.com	17103107035	3	2017	EE
180	Abhishek Raj	abhishekraj0106@gmail.com	17103107039	3	2017	EE
181	Anamika Bharti	anamika9204@gmail.com	17103107041	3	2017	EE
182	Mithun Kumar	mithunchkrwarti098@gmail.com	17103107043	3	2017	EE
183	Navin Pushkar	pushkar24599@gmail.com	17103107050	3	2017	EE
184	Raj Kamal	rajkamal1700@gmail.com	17103107056	3	2017	EE
185	Rajesh Das	rajeshkumarmit93046@gmail.com	17104107003	3	2017	EC
186	Aushutosh Kumar	aushutoshkumar757@gmail.com	17104107008	3	2017	EC
187	Nidhi Singh	nidhisingh040899@gmail.com	17104107018	3	2017	EC
188	Shreya Swaraj	sonalilove231999@gmail.com	17104107028	3	2017	EC
189	Anurag Prakash	anuragprakash1998@gmail.com	17106107002	3	2017	IT
190	Esha Nandini	esha.nandini24@gmail.com	17106107020	3	2017	IT
191	Iffat Naaz	iffatnaaz2k17@gmail.com	17106107023	3	2017	IT
192	Md Obaidullah	mdobaidarif98@gmail.com	17106107026	3	2017	IT
193	Vinit Raj	vraj538@gmail.com	18101107004	3	2018	CE
194	Adarsh Kumar	adarshkmukhiya@gmail.com	18101107015	3	2018	CE
195	Shweta Kashyap	shwetakashyap1109@gmail.com	18101107051	3	2018	CE
196	Anushka Kumari	anushka6514@gmail.com	18103107010	3	2018	EE
197	Anisha Kumari	anisha4pcckraj@gmail.com	18104107016	3	2018	EC
198	Prakash Kumar	aarvisingh216@gmail.com	18104107028	3	2018	EC
199	Swati Kumari	swatiku000055gamil.com@gmail.com	18104107034	3	2018	EC
200	Amar Lata	amarlata1996@gmail.com	18104107908	3	2017	EC
201	Astha	astha.shri24@gmail.com	18106107001	3	2018	IT
202	Abhishek Kumar	abhishekkumar801104@gmail.com	18106107003	3	2018	IT
203	Aniket Kumar Sinha	aniketsinha1304@gmail.com	18106107004	3	2018	IT
204	Kumar Abhishek	abhijha3820@gmail.com	18106107012	3	2018	IT
205	Sachin Kumar	sachin3889.skiit@gmail.com	18106107023	3	2018	IT
206	Suryakant Vishal	26surya412@gmail.com	18106107027	3	2018	IT
207	Anjali Kumari	kumarianjalirani2000@gmail.com	18106107907	3	2017	IT
208	Ravi Raj	raviraj0884@gmail.com	18107107003	3	2018	LT
209	Harsh Raj	harshrajlm10@gmail.com	18107107008	3	2018	LT
210	Balram	balram.sonu76@gmail.com	19101107028	3	2019	CE
211	Rupesh Raj	raj.rpesh@gmail.com	19101107056	3	2019	CE
212	Anurag Priyadarshi	m.swamiji007@gmail.com	19102107012	3	2019	ME
213	Md Amaan	mdamaan0508@gmail.com	19102107028	3	2019	ME
214	Vinay Kumar	vinay25mit@gmail.com	19103107004	3	2019	EE
215	Deepak Kumar	mrdeepaksaharsa@gmail.com	19103107031	3	2019	EE
216	Kumar Rishabh	kumar.rishabh4200@gmail.com	19103107038	3	2019	EE
217	Aryan Singh	aryansingh181200@gmail.com	19104107018	3	2019	EC

218	Shivani Kumari	pritykumari5408@gmail.com	19106107031	3	2019	IT
219	Swati	varsha.swati0608@gmail.com	16101107017	2	2016	CE
220	Shatrudhan Kumar	kesharishatrudhan444@gmail.com	16102107035	2	2016	ME
221	Amit Kumar Pandit	amanamank61@gmail.com	16103107014	2	2016	EE
222	Shubham Kumar	shubhamprem18@gmail.com	16103107020	2	2016	EE
223	Sristi Sneha	sristisneha777@gmail.com	16104107003	2	2016	EC
224	Vimla Bharti	vibhakumari56226@gmail.com	16104107032	2	2016	EC
225	Himanshu Raj	himanshu2601.raj@gmail.com	16104107037	2	2016	EC
226	Megha Sinha	meghasinha0403@gmail.com	16106107004	2	2016	IT
227	Janu Kumar Jha	janukjha@gmail.com	16106107018	2	2016	IT
228	Divyanshu Shekhar	ddivyanshushekhar1998@gmail.com	17101107011	2	2017	CE
229	Shreya Patel	shreyapatel292929@gmail.com	17101107013	2	2017	CE
230	Natasha	natasha17c06@gmail.com	17101107014	2	2017	CE
231	Prabhash Kumar	prabhash1998kumar@gmail.com	17101107024	2	2017	CE
232	Vikash Kumar	vikash.vk649@gmail.com	17101107031	2	2017	CE
233	Deepak Kumar	deepakk82640@gmail.com	17101107038	2	2017	CE
234	Shatrunjay Kumar	shatrunjaykumar69@gmail.com	17102107052	2	2017	ME
235	Kannu Priya	kannupriya002@gmail.com	17103107003	2	2017	EE
236	Shivam Dubey	hariomdadra94@gmail.com	17103107008	2	2017	EE
237	Abhijeet Kumar	abhijeet341@gmail.com	17103107013	2	2017	EE
238	Saurav Kumar Sinha	sauravpatnabihar@gmail.com	17103107015	2	2017	EE
239	Ashutosh Kumar	ashutosh9835247718@gmail.com	17103107019	2	2017	EE
240	Deepak Kumar	6deepakkumar1721@gmail.com	17103107020	2	2017	EE
241	Pavan Kumar	pavangkumar01@gmail.com	17103107023	2	2017	EE
242	Mohammad Ehshanullah	mdehshanullah2018@gmail.com	17103107028	2	2017	EE
243	Masyood Ahmad	ahmadmasyood@gmail.com	17103107029	2	2017	EE
244	Abhimanyu Kumar Singh	starabhimanyu21@gmail.com	17103107030	2	2017	EE
245	Manish Kumar	manishmit01@gmail.com	17103107037	2	2017	EE
246	Sweta Kumari	swetathakur269@gmail.com	17103107038	2	2017	EE
247	Sandeep Kumar Sinha	kumarsandeepsinha123@gmail.com	17103107040	2	2017	EE
248	Kumar Aryan	kumararyan1087@gmail.com	17103107045	2	2017	EE
249	Ashwini Kumar	ashwini.111163@gmail.com	17103107048	2	2017	EE
250	Praveen Kumar Safi	praveenkumarjnv1920@gmail.com	17103107049	2	2017	EE
251	Santosh Kumar Ram	santoshkumarss750@gmail.com	17103107052	2	2017	EE
252	Anamika Kaushik	kaushikanamika567@gmail.com	17103107053	2	2017	EE
253	Bunty Kumar Paswan	buntykumar4096@gmail.com	17103107054	2	2017	EE
254	Ashmita Kumari	ashmitasinha2211@gmail.com	17104107011	2	2017	EC
255	Shilpa Sonali	shilpasonali1101@gmail.com	17104107014	2	2017	EC
256	Abhishek Rana	abhishekrana1702@gmail.com	17104107022	2	2017	EC
257	Manisha Prakash	prakashmanisha1997@gmail.com	17104107027	2	2017	EC
258	Suraj Kumar	surajkrmfp12@gmail.com	17104107037	2	2017	EC
259	Sudhakar Prakash	sudhakarprakash108@gmail.com	17106107006	2	2017	IT
260	Abhishek Kumar	abhishek.ara9709@gmail.com	17106107012	2	2017	IT
261	Utkarsh Raj	rajutkarsh093@gmail.com	18101107002	2	2018	CE

262	Yeshwant Singh	yeshwantsingh2000@gmail.com	18102107053	2	2018	ME
263	Md Haidar Ali	haidarindian9956@gmail.com	18102107054	2	2018	ME
264	Ashutosh Ranjan	ar01012000@gmail.com	18102107056	2	2018	ME
265	Anurag	anuragrpsmdb@gmail.com	18103107008	2	2018	EE
266	Jitendra Kumar Sinha	jitendrakumarsinha95@gmail.com	18103107018	2	2018	EE
267	Komal Deep	komaldeep47011@gmail.com	18103107019	2	2018	EE
268	Prachi Kumari	prachikumarimfp@gmail.com	18103107033	2	2018	EE
269	Satyam	satyamsingh6698@gmail.com	18103107047	2	2018	EE
270	Saurav Kumar	sauravk72@gmail.com	18103107048	2	2018	EE
271	Shashi Ranjan	sr581258@gmail.com	18103107051	2	2018	EE
272	Ajit Kumar	ajitkumar152201@gmail.com	18103107063	2	2018	EE
273	Reyaj Ansari	reyajansari70@gmail.com	18103107909	2	2017	EE
274	Himanshu Kumar	himanshukumardumra@gmail.com	18104107009	2	2018	EC
275	Raushan Kumar	raushankumar241099@gmail.com	18104107010	2	2018	EC
276	Anupriya	anuproya205@gmail.com	18104107015	2	2018	EC
277	Md Mozammil Ansari	modassirrr@gmail.com	18104107023	2	2018	EC
278	Juhi Kumari	kumarijuhi0204@gmail.com	18106107008	2	2018	IT
279	Sumit Paswan	sumitpaswan199@gmail.com	18106107021	2	2018	IT
280	Subhash Kumar	bhartikr14032@gmail.com	18106107905	2	2017	IT
281	Prince Kumar	pkprince0034@gmail.com	18106107908	2	2017	IT
282	Prashant Sinha	prashantsinha082000@gmail.com	19101107002	2	2019	CE
283	Harsh Raj	harshraj1405@gmail.com	19101107018	2	2019	CE
284	Isha Singh	ishasingh1119@gmail.com	19102107016	2	2019	ME
285	Manoranjan	ranjanmano2001@gmail.com	19102107023	2	2019	ME
286	Rohit Kumar	rohitkumarmechanical19@gmail.com	19102107050	2	2019	ME
287	Vivekanand	vivekanand95k@gmail.com	19103107012	2	2019	EE
288	Annu Kumari	annukumari2629@gmail.com	19103107015	2	2019	EE
289	Gulshan Kumar	gulshan8213@gmail.com	19103107029	2	2019	EE
290	Avinash Kumar Sinha	avinashk662001@gmail.com	19103107032	2	2019	EE
291	Honey Kumari	honey.rav02@gmail.com	19103107037	2	2019	EE
292	Abhishek Singh	as7714935@gmail.com	19103107044	2	2019	EE
293	Anchal Kumari	anchalchaurasiya93@gmail.com	19103107050	2	2019	EE
294	Md Aftab	aftabmd762@gmail.com	19103107059	2	2019	EE
295	Mani Bhushan Kumar	manibhushan870@gmail.com	19104107009	2	2019	EC
296	Nidhi Kumari	nidhi123kri@gmail.com	19104107013	2	2019	EC
297	Adarsh Ranjan	adarshranjan4141@gmail.com	19106107002	2	2019	IT
298	Md Saif Ali	mdsaifali0078696@gmail.com	19106107022	2	2019	IT
299	Piyush Shekhar	piyushsk46077@gmail.com	19106107023	2	2019	IT
300	Rishav Anand	rishavanand98765@gmail.com	19106107027	2	2019	IT
301	Rishabh Kumar Singh	rishabh.qwertyuio@gmail.com	19106107028	2	2019	IT
302	Saurabh Kumar	saurabhkr1322001@gmail.com	19106107032	2	2019	IT
303	Utkarsh	utkarsh.raj.16718@gmail.com	19106107034	2	2019	IT
304	Rituraj Anand	babulrajallen8082@gmail.com	19109107046	2	2019	PH
305	Abhishek Anand	abhianand9572078491@gmail.com	16102107013	1	2016	ME

306	Vivek Kumar	vivekmittal16e26@gmail.com	16103107052	1	2016	EE
307	Aghaz Junaid	aghazjunaid96@gmail.com	16104107005	1	2016	EC
308	Nidhi	nidhi070397@gmail.com	16104107008	1	2016	EC
309	Aditya Ranjan	aditya.ranjan121@gmail.com	16106107032	1	2016	IT
310	Deepak Kumar Chauhan	deepakmit1997@gmail.com	17101107003	1	2017	CE
311	Abhishek Raj	4140108raj@gmail.com	17101107010	1	2017	CE
312	Mohit Kumar	mohitkr7765@gmail.com	17101107016	1	2017	CE
313	Rajranjan Kumar	rajranjankumar1999@gmail.com	17101107017	1	2017	CE
314	Sonu Kumar	sonukumar7607665@gmail.com	17101107018	1	2017	CE
315	Ravish Kumar	ravish111rg@gmail.com	17101107026	1	2017	CE
316	Ragani Kumari	raggu46@gmail.com	17101107027	1	2017	CE
317	Mohit Kumar	8964mohitkumar@gmail.com	17101107032	1	2017	CE
318	Saniya Singh	saniyasingh1999@gmail.com	17101107040	1	2017	CE
319	Nicky Kumari	nickykumari.mki@gmail.com	17101107041	1	2017	CE
320	Akriti Singh	aakritisingh3200@gmail.com	17101107042	1	2017	CE
321	Gaurav Kumar	gauravkr22598@gmail.com	17101107047	1	2017	CE
322	Nitish Kumar	knitish752@gmail.com	17102107021	1	2017	ME
323	Mohit Raj	rmohi1998@gmail.com	17102107050	1	2017	ME
324	Sintu Kumar	kumarsintu821999@gmail.com	17103107024	1	2017	EE
325	Ghanshyam Kumar	ghanshyamkumarsmp11@gmail.com	17103107025	1	2017	EE
326	Ashish Kumar	smileyashish098@gmail.com	17103107027	1	2017	EE
327	Nelshan Rani	nelshanrani852@gmail.com	17103107033	1	2017	EE
328	Prem Kumar Bharti	premstm96@gmail.com	17103107051	1	2017	EE
329	Aman Raj	aman90312@gmail.com	17103107055	1	2017	EE
330	Sushil Kumar	kumarshushil30@gmail.com	17103107060	1	2017	EE
331	Gautam Kumar	mr.gautam369@gmail.com	17104107004	1	2017	EC
332	Akash Deep	akashdeephjp6@gmail.com	17104107013	1	2017	EC
333	Puja Kumari	emailpuja98@gmail.com	17104107019	1	2017	EC
334	Md Sarfaraz Iqbal	sarfaraziqbal7860@gmail.com	17104107032	1	2017	EC
335	Rohit Kumar	rohitkumar08640@gmail.com	17104107041	1	2017	EC
336	Rishabh Kumar	kumarrishubh0@gmail.com	17106107007	1	2017	IT
337	Arvind Kumar	mit17it32@gmail.com	17106107018	1	2017	IT
338	Vikash Kumar	vikashvk2316@gmail.com	18101107003	1	2018	CE
339	Vandana Kumari	mail2vandnayadav@gmail.com	18101107009	1	2018	CE
340	Abhishek Kumar	abhishek.muz17@gmail.com	18101107014	1	2018	CE
341	Aditya Kumar Gautam	gautamaditya582@gmail.com	18101107017	1	2018	CE
342	Nitish Kumar	singhnitish9525@gmail.com	18101107035	1	2018	CE
343	Shivam Kumar	shivamkmr079@gmail.com	18101107049	1	2018	CE
344	Sumit Shekhar	sumitshekhar0099@gmail.com	18101107058	1	2018	CE
345	Anurag Anand	pk365365@gmail.com	18102107007	1	2018	ME
346	Shahid Afroz	shahidafroz59@gmail.com	18102107019	1	2018	ME
347	Pritam Kumar	pritamkumar2252@gmail.com	18102107025	1	2018	ME
348	Raj Shree	rajshree3082001@gmail.com	18102107033	1	2018	ME
349	Suprity Kumari	116suprity116@gmail.com	18102107047	1	2018	ME

350	Subhash Kumar	subhashmitm@gmail.com	18102107901	1	2017	ME
351	Amarjeet Kumar	amarjeetkr5381@gmail.com	18103107007	1	2018	EE
352	Ankit Kumar	ankitkumar5998@gmail.com	18103107009	1	2018	EE
353	Ashish Kumar Sinha	ashishkumar0952@gmail.com	18103107011	1	2018	EE
354	Abbishek Kumar	abhishekpatel5504@gmail.com	18104107002	1	2018	EC
355	Priyanshu Kumar	pkumar01011999@gmail.com	18104107004	1	2018	EC
356	Lalit Kumar Bharti	lalitkr237@gmail.com	18104107019	1	2018	EC
357	Sonam Kumari	sonamgwp1998@gmail.com	18104107901	1	2017	EC
358	Gaurav Kumar	gauravkunal98@gmail.com	18106107006	1	2018	IT
359	Dilip Kumar	dilipkr973@gmail.com	18106107007	1	2018	IT
360	Kajal Singh	kajalsingh05mar@gmail.com	18106107010	1	2018	IT
361	Shashi Shekhar	shashiyadav7629518@gmail.com	18106107032	1	2018	IT
362	Abhinav Kumar	abhinav5678singh@gmail.com	18106107034	1	2018	IT
363	Deepak Kumar Sharma	ds047321@gmail.com	19101107017	1	2019	CE
364	Rajeev Kumar	rk5231583@gmail.com	19101107020	1	2019	CE
365	Vikas Kumar	vikasgupta9973@gmail.com	19101107042	1	2019	CE
366	Sahil Kumar	ksahilkumar001@gmail.com	19101107058	1	2019	CE
367	Aaradhya Roy	roysandhya062@gmail.com	19101107904	1	2018	CE
368	Satish Pal	satishpal615@gmail.com	19101107906	1	2018	CE
369	Akash Kumar	akashkumarssmm123@gmail.com	19102107007	1	2019	ME
370	Aman Kumar Anand	amanbex453@gmail.com	19102107009	1	2019	ME
371	Chandan Kumar	yaduvanshichandan.1999@gmail.com	19102107014	1	2019	ME
372	Prince Maurya	kmauryap@gmail.com	19102107036	1	2019	ME
373	Twinkle Rani	twinklerani0206@gmail.com	19102107042	1	2019	ME
374	Pulkit Raj	pulkittraj@gmail.com	19102107051	1	2019	ME
375	Niraj Kumar	nirajkumar843120@gmail.com	19103107042	1	2019	EE
376	Abhishek Bhaskar	abhi2702001@gmail.com	19103107045	1	2019	EE
377	Nishant Prabhakar	nishant12900@gmail.com	19103107056	1	2019	EE
378	Sourabh Kumar	sourabhkr1175@gmail.com	19103107057	1	2019	EE
379	Aakash Ranjan Ghosh	arghosh401@gmail.com	19103107058	1	2019	EE
380	Neha Bharti	nehabharti27112002@gmail.com	19104107005	1	2019	EC
381	Aditya Bhushan	adityabhushan63@gmail.com	19104107010	1	2019	EC
382	Md.Sanaullah	sanaullahmd056@gmail.com	19104107020	1	2019	EC
383	Abhishek Shourya Rawat	asrawat13999@gmail.com	19104107024	1	2019	EC
384	Swati Singh	swatisinghbgp11@gmail.com	19104107032	1	2019	EC
385	Sofia Shaheen	sofiashaheen601@gmail.com	19104107034	1	2019	EC
386	Vivek Kumar	vivekkumar94314@gmail.com	19104107036	1	2019	EC
387	Aqsa Kibria	aqsakibria32@gmail.com	19104107042	1	2019	EC
388	Vandana Preyasi	ruchi93343@gmail.com	19104107903	1	2018	EC
389	Sumant Raj	sumantrajbedaulia@gmail.com	19104107905	1	2018	EC
390	Aditya Kumar Ashwini	adityakrashwani@gmail.com	19106107006	1	2019	IT
391	Aman Kumar	amanmit989@gmail.com	19106107009	1	2019	IT
392	Komal Rani	aradhyakomal20@gmail.com	19106107016	1	2019	IT
393	Hrishita Jha	soumyajha1510@gmail.com	19106107017	1	2019	IT

394	Mohammad Ghulam Mustafa	mg15032000@gmail.com	19106107021	1	2019	IT
395	Siddhu Kumar	siddhu8252@gmail.com	19106107030	1	2019	IT
396	Shubham Kumar	kumar.shubham.singh99@gmail.com	19107107007	1	2019	LT
397	Vivek Kumar	vk8540@gmail.com	19109107001	1	2019	PH
398	Md Sayeed Alam	sayeedalam1997@gmail.com	19109107019	1	2019	PH

Annexure 10.2 b

Muzaffarpur Institute of Technology, Muzaffarpur

Details of Faculties Who Completed Courses from Coursera (Apr - Aug 2020)

S. No.	Course Name	University	Department	No. of Courses
1	Dr Achyutesh Dixit	acdixit55@gmail.com	AS & H	2
2	Ashutosh Kumar Sinha	aksinha_mit@mitmuzaffarpur.org	AS & H	1
3	Dr. Amit Kumar Verma	amitkverma.ismdhanbad@gmail.com	AS & H	1
4	Ashutosh Kumar	ashu1959mit@gmail.com	AS & H	7
5	Prakash Kumar	prakashmadhu994@gmail.com	AS & H	3
6	Dr. Kumari Shail Bala	shail.bala82@gmail.com	AS & H	4
7	Swatantra Kumar Tiwari	sktiwari4bhu@gmail.com	AS & H	7
8	Ashish Kumar	ashishce@mitmuzaffarpur.org	CE	16
9	Atul Kumar Rahul	atulcivil.iitbhu@gmail.com	CE	18
10	Chandra Bhusan Rai	cbrai.mit@gmail.com	CE	1
11	Akash Priyadarshee	i.akashpriyadarshee1@gmail.com	CE	31
12	Santosh Kumar	kumarsantosh386@gmail.com	CE	7
13	Manoj Kumar	man.kr.77@gmail.com	CE	10
14	Niraj Kumar	niraj@mitmuzaffarpur.org	CE	16
15	Pallav Kumar	pallav.ce@gmail.com	CE	1
16	Pranav Kumar	pranav.kumar52@mitmuzaffarpur.org	CE	1
17	Rishi Srivastava	rishi@mitmuzaffarpur.org	CE	8
18	Shivangi Mishra	shivangicivil0038@gmail.com	CE	1
19	Shiwanshu Shekhar	shiwa.2k6@gmail.com	CE	9
20	Dr. Subha Sinha	starsubha@gmail.com	CE	5
21	Sunil Kumar	sunil.k.mit1@gmail.com	CE	1
22	Sushila Sharma	sushilace@mitmuzaffarpur.org	CE	5
23	Kumar Utkarsh	utkarsh@mitmuzaffarpur.org	CE	7
24	Vijay Kumar	vijayfce@mitmuzaffarpur.org	CE	31
25	Vikash Kumar	vikashkumar@mitmuzaffarpur.org	CE	1
26	Mohd Zia Hussain	zia@mitmuzaffarpur.org	CE	1
27	Ajay Kumar	ajay.28.kumar@gmail.com	EC	1
28	Rakesh Kumar	kumar.rakesh299@gmail.com	EC	1
29	Mohit Kumar	mohitkumar@mitmuzaffarpur.org	EC	3
30	Ravi Kumar	ravikumar@mitmuzaffarpur.org	EC	28
31	Saket Kumar	sgsaket1@mitmuzaffarpur.org	EC	3
32	Shadab Rabbani	shadabrabbani2008@gmail.com	EC	2
33	Umar Farooque	ufarooque.mit@gmail.com	EC	2
34	Hari Charan Verma	hcverma@mitmuzaffarpur.org	EE	16
35	Nayan Kumar	kumar@mitmuzaffarpur.org	EE	5
36	Ram Sagar Singh	rssingh3763@gmail.com	EE	1
37	Shahzad Ahsan.	shahzad@mitmuzaffarpur.org	EE	1
38	Yagyanand Sharma	ynsharma@mitmuzaffarpur.org	EE	1
39	Abhishek Kumar	abhishek.mit0614@gmail.com	IT	1
40	Santosh Kumar Rai	santoshrai@mitmuzaffarpur.org	IT	2
41	Savya Sachi	savyasachi51@gmail.com	IT	7
42	Ashish Kumar	shish.ashish@gmail.com	IT	1
43	Shweta Kumari	shweta@mitmuzaffarpur.org	IT	5

Details of Faculties Who Completed Courses from Coursera (Apr - Aug 2020)

44	Vijay Kumar	vijay@mitmuzaffarpur.org	IT	3
45	Arati Kumari	aratimit283@gmail.com	LT	2
46	Sanjay Kumar Choudhary	choudharysk108@gmail.com	LT	6
47	Manikant Kumar	manikantfddi@gmail.com	LT	2
48	Mithilesh Kumar Rai	mkrai246@gmail.com	LT	1
49	Ankit Kumar	ankitkr606@mitmuzaffarpur.org	ME	2
50	Santosh Kumar	connecto.santosh@gmail.com	ME	4
51	Gaurav Kumar	garv.20132015@rediffmail.com	ME	1
52	Hemant Kumar Choudhary	hemant@mitmuzaffarpur.org	ME	2
53	Irfan Haider	irfan@mitmuzaffarpur.org	ME	4
54	Md. Irshad Alam	irshad.iitk@gmail.com	ME	1
55	Jigesh Yadav	jigeshnitjsr@gmail.com	ME	1
56	Gulshan Kumar	megulsan@gmail.com	ME	6
57	Manhar Kumar Sah	mhrkmrsh@gmail.com	ME	1
58	Narayan Kumar	narayankumar@mitmuzaffarpur.org	ME	1
59	Niteesh Kumar Dubey	niteeshdubey@mitmuzaffarpur.org	ME	1
60	Amit Kumar	tiwaryamit25@gmail.com	ME	1
61	Dr Ghanshyam Thakur	gthakurmit@gmail.com	Pharmacy	4

TODI TULSYAN & CO.
CHARTERED ACCOUNTANTS

HEAD OFFICE :
602, LUV KUSH TOWER,
EXHIBITION ROAD
PATNA - 800 001
Phone: 2320211/2320056 (O)
Fax: 0612-2320056
Email: ttcopatna@gmail.com

INTERNAL AUDIT REPORT

Muzaffarpur Institute of Technology, Muzaffarpur

For the period October 1, 2019 to March 31, 2020

Part A: Brief details of the Auditee and Audit:

a. Name and address of the Auditee : Muzaffarpur Institute of Technology, Muzaffarpur Bihar-842003
b. Namesof Office bearers : Prof. JagdanandJha (Principal)
Ashish Kumar (Co-ordinator)
c. Name/s of Auditor : Todi Tulsyan & Co.
d. Days of audit : 3
e. Period covered in the previous audit: 01-04-2019 to 30-09-2019
f. Period covered in the current audit : 01-10-2019 to 31-03-2020

We have conducted the Internal Audit of TEQIP-III Project of Muzaffarpur Institute of Technology, Muzaffarpur, Bihar-842003 for the period from October 1, 2019 to March 31, 2020.

We have carried out the audit in accordance with the standard on auditing promulgated by the Institute of chartered Accountants of India. It is the responsibility of the management to maintain the Project Financial Management System as prescribed by the funding Agency in cash system of accounting, fair and proper documentation, generation of books and records and the various Interim financial reports and annual statement and to implement a proper Internal control system commensurate with the size of organization. Our responsibility is to verify the books and accounts commensurate with the standard procedures and guidelines followed by the project for the different level and to see that there is proper documentation and internal control in existence during the period of Audit and to report the deficiencies, if any, existing in the operation of the project.

Part B: Executive Summary:

a) Objectives of audit- Internal audit has been carried out with object to check accuracy and authenticity of records presented by management, ascertain that accounting policies are followed as per plans, analyze & improve internal check system, facilitate prevention and detection of misstatements, examine safeguarding of asset, conduct special investigation for management, provide new suggestion to management, review operation of overall internal control system, evaluate adequacy of internal control system and ensure compliance of laid down policies, procedures, accounting and financial reporting documented in Financial Management Manual of the project.

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b) Methodology of audit

The Audit was conducted on the basis of finalized Audit Program. Internal Audit Program was mainly focused on following areas:

1. An assessment of the adequacy of the Project Financial Management System including internal control. The financial management system should include methods and records established to identify, assemble, analyze, classify, record and report on transaction and to maintain accountability for the related assets and liabilities.
2. That the entire project fund have been used in accordance with the condition of the relevant financing agreement, with due attention to transparency, economy and efficiency and only for the purpose for which the financing was provided.
3. All necessary supporting documents, records and books/ statements of accounts have been maintained and all necessary supporting document such as records, vouchers, bids etc. and books of accounts have been kept in respect of all project expenditure.

c) Status of implementation of the financial management system:

: During audit we noted that Financial Management System has been implemented for the period from 01-10-2019 to 31-03-2020.

d) Status of compliance of previous audit reports, including major audit observations pending compliance

: No pending compliances of previous Audit Report

e) Keyareasof weaknessesthat need improvement, classifiedinto thefollowingareas :

i. Disallowance of expenditure as per the World Bank rules : Nil
ii. Procedural Lapse: TDS/GST TDS deducted but not reflected in Books of accounts maintained in Tally.
iii. Accounting Lapse: Nil.
iv. Accounting books &records not maintained: Nil.

f) Recommendations for improvements

Executive Summary to include the following format:-

Para No.	Observations	Implicationswith risks involved	Recommendations for improvement	Auditee's Comments / Agreed Action	Agreed Timeline for compliance
1.	TDS Compliances	Interest/ Penalty on delay Return.	TDS should be deposited on time to avoid interest/penalty.		
2.	GST TDS Compliances	Interest/ penalty on delay Return	GST TDS should be deposited on time to		

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			avoid interest/penalty.		
3.	Accounting Voucher related	Procedural lapse involved	Attach all supporting to related expenses		
4.	Procurement related	Procedural lapse involved	Followed all the procedures for procurements.		

Part C: Compliance to previous Audit Reports

: Previous Audit Report complied subject to
-Gem related procurement

Part D: Serious Observations:

: We have not come across serious observations:

Part E: Other Observations:

1. **TDS Compliance:**
   TDS certificate Form 16A is not issued on quarterly basis; certificate should issue to concerned parties within 15 days from the furnishing of return otherwise as per provision of Income Tax Act penalty of Rs.100 per day will be levied from the date of default.

2. **GST TDS Compliance:**
   In terms of section 50 of the CGST Act, 2017, applicable w.e.f. 01.10.2018, 2% GST-TDS is required to be deducted on supplies of goods and services above Rs.2.50 lakhs. Delay in deposit of GST TDS entail interest/ penalty liability, which we recommend should be avoided.

3. **PFMS Transactions:**
   a) PFMS Reconciliation Statement:

Particulars	Oct-Dec,19 (Rs.)	Jan-Mar,20 (Rs.)	Total (Rs.)
Expenditure as per PFMS Statement-M32(Rs.)	2,52,52,144	11,800,831	3,70,52,975
Expenditure as per books of Accounts(Rs.)	2,52,52,144	11,800,831	3,70,52,975
Differences (Rs.)	Nil	Nil	Nil

4. **Accounting:**
   a) Amount related to GST TDS, TDS, CRS and amount relevant to college have been received in college account and balance as on 31.03.2020 is Rs 102,73,839.04. Reconciliation should be required to identify the amount relating to GST TDS, TDS and CRS is kept in college a/c as on 31.03.2020.

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b) As per Financial Management Manual, Basis of Accounting shall be on Cash Basis, then to extent actual payments of Rs.1,05,18,128.00 as on 31.12.2019 & Rs 1,02,73,839.04 as on 31.03.2020 (kept in bank account) not made to concerned parties/ supplier, cannot be treated as expenditure for the year as on 31-03-2020.

5. Details of Plan & Budget Expenses and Actual Expenses on Procurement is given below:
Plan Budget Expenses

Gross Estimated/ Budgeted cost as per PMSS (Rs.)	Amount spent as per PFMS up to 31.03.2020 (Rs.)	% of PLA
6,60,00,000	6,60,00,000.00	100.00

6. Procurement related observations:

i) Details of procurement expenses as per PFMS and PMSS and differences, if any, is given below as on 31.03.2020:

Years	**As per PFMS (Rs.)**
For the period 2017-18	-
For the period 2018-19	2,45,58,873.00
For the period 2019-20	4,14,41,127.00
1. Total As per Ep04/ tally	**6,60,00,000.00**
2. Amount spent as per PFMS (M-32)	**6,60,00,000.00**
3. Total As per PMSS	6,59,99,999.04
Difference (Rs.) (1-3)	**.96**

Note: difference due to rounding of figures.

ii) We have verified procurement related documents and found the followings shortcoming
- that total procurement of goods are made of Rs 140,93,045/- during October 2019 to March 2020 but purchase is not made through GEM in any cases.

7. Meeting of Board of Governors held on:

a) 7th on 07-06-2019.
b) 8th on 24-08-2019.
c) 9th on 10-12-2019
d) 10th on 28-02-2020

8. Details of Expenditure (Component Wise) as per PFMS:

Amount (Rs.)

Component	**Particulars**	**Oct-Dec, 19**	**Jan-Mar,20**	**Total**
1.1.1	Procurement of Goods	1,37,83,550.00	3,09,495.00	1,40,93,045.00
1.1.2	Academic Process	44,83,587.00	41,40,357.00	86,23,944.00
1.1.3	Operating Costs	8,38,854.00	8,95,939.00	17,34,793.00
1.1.4	Faculty Reforms	61,46,153.00	64,55,040.00	1,26,01,193.00
	Total	**2,52,52,144.00**	**1,18,00,831**	**3,70,52,975.00**

TOSHNIWAL & CO. FRN 002180C PATNA CHARTERED ACCOUNTANTS

9. CRS related:-

I) we observed that the following amount received on account of CRS in the bank account of college. There is no expenditure on this account as on 31.03.2020.

Sl No.	Date	Amount(Rs.)
1.	03.12.2019	24,26,750/-
2.	30.12.2019	1,82,750/-

i) Amount on account of CRS was received in the name of college account. It should be opened a separate account for CRS.

Part F: Executive Summary and Suggestions/Recommendations:

Executive Summary as already given in Part-B above.

For TODI TULSYAN & Co.
Chartered Accountants
FRN: 002180C

(Sushil Kumar Tulsyan)
Partner
M. No. 075899
UDIN: 20075899AAAADH9337

Place: Patna
Date: 09-07-2020

Annexure- 10.4

Smart India Hackathon 2020 - Software Edition

Team "Rainbow 6" having 6 students and 2 mentors of the institute participated in the Grand Finale of SIH 2020- Software Edition, held online from 1st to 3rd August 2020. It was attended virtually from IT Lab of the institute. The problem statement title was "Predictive Maintenance of Battery Life of Electric Vehicles" and problem statement ID was "PK368". The team won the Grand Finale SIH-20 Software Edition of their category for the said problem statement. Team won a cash prize of Rupees One Lakh.

Team Details are as given in the table below.

Student Details			
S. No.	Name	Branch	Year
1.	Anurag (Team Leader)	Electrical Engineering	2
2.	Ashish Kumar	Electrical Engineering	2
3.	Utpal Kant	Electrical Engineering	3
4.	Vidya Kumari	Electrical Engineering	3
5.	Aman Satyam	Electrical Engineering	1
6.	Rishabh Kumar	Information Technology	3
Mentor Details			
1.	Ashish Kumar	Information Technology	Assistant Professor
2.	Mohit Kumar	Electronics and Communication Engineering	Assistant Professor

Link to SIH 2020 Software Edition Finale Result- https://www.sih.gov.in/SoftwarefinalResult2020

Link to the valedictory session - http://www.youtube.com/watch?v=wNvH9-M5Y0M

छात्रों को मिलेंगे 1 लाख रुपए • देशभर के 400 से अधिक इंजीनियरिंग संस्थानों की टीम प्रतियोगिता में हुई शामिल

बैट्री मेंटेनेंस पर सॉफ्टवेयर बना एमआईटी ने लगातार दूसरे वर्ष जीती स्मार्ट इंडिया हैकथॉन ऑनलाइन प्रतियोगिता

एजुकेशन रिपोर्टर | मुजफ्फरपुर

एमआईटी के नाम एक और उपलब्धि जुड़ गई है। लगातार दूसरे वर्ष कॉलेज के छात्रों ने राष्ट्रीय स्तर पर आयोजित स्मार्ट इंडिया हैकथॉन प्रतियोगिता (सॉफ्टवेयर एडिशन) जीत ली है। दिल्ली में आयोजित इस प्रतियोगिता में एमआईटी की रेनबो-6 टीम ने ऊर्जा मंत्रालय की ओर से दिए गए समस्या पर प्रिडेक्टिव मेंटेनेंस ऑफ बैटरी लाइफ पर छात्रों ने इसका सॉफ्टवेयर सॉल्यूशन देकर यह खिताब अपने नाम किया है। प्रतियोगिता का आयोजन आईसीटीई ने किया था। अब इस मॉडल को रियलिस्टिक बनाया जाएगा। । मॉडल को डेवलप करने के लिए छात्रों को 1 लाख रुपए मिलेंगे। देश के 400 से अधिक इंजीनियरिंग संस्थानों की टीम ने इसमें हिस्सा लिया था। एमआईटी के प्राचार्य डॉ. जेएन झा ने इस उपलब्धि के लिए टीम और शिक्षकों को बधाई दी।

मॉडल के साथ एमआईटी की टीम।

टीम के सदस्य

अनुराग	इलेक्ट्रिकल	2018 बैच
उत्पल कांत	इलेक्ट्रिकल	2017 बैच
विद्या	इलेक्ट्रिकल	2017 बैच
आशीष कुमार	इलेक्ट्रिकल	2018 बैच
ऋषभ कुमार	आईटी	2017 बैच
अमन सत्यम	इलेक्ट्रिकल	2019 बैच

मेंटर – **आशीष कुमार** (आईटी), **मोहित कुमार** (ईसी)
एडिशनल सपोर्ट – **प्रो. अंकित कुमार सिंह** (मेकेनिकल)

इलेक्ट्रिकल वेहिकल में इस्तेमाल होने वाली बैट्री की सॉफ्टवेयर से होगी मेंटेनेंस : छात्रों ने बिजली से चलने वाले वाहनों में इस्तेमाल होने वाली बैटरी मेंटेनेंस से लेकर उसके संरक्षण के लिए भी सॉफ्टवेयर विकसित किया। मेंटर प्रो. आशीष ने बताया कि सॉफ्टवेयर की मदद से बैट्री को कम समय में चार्ज करने के साथ खपत और तय की जाने वाली दूरी भी दिखेगी।

नहीं मिला इलेक्ट्रिकल वेहिकल तो बना दी इलेक्ट्रिकल साईकिल : लॉकडाउन के कारण एमआईटी टीम को काफी परेशानी हुई। इलेक्ट्रिकल वेहिकल नहीं मिलने पर छात्र उत्पलकांत ने जहानाबाद में अपने घर पर ही इलेक्ट्रिकल साईकिल बना ली। इसी का इस्तेमाल डाटा संग्रह के लिए किया गया। पूरी टीम प्रो. आशीष के घर 5 दिनों तक रह मॉडल को अंतिम रूप दिया।

हैकथॉन में एमआईटी ने जमाया कब्जा

मुजफ्फरपुर | वरीय संवाददाता

एमआईटी ने स्मार्ट इंडिया हैकथॉन के सॉफ्टवेयर एडिशन पर कब्जा जमाया है। गत एक से तीन अगस्त तक दिल्ली में आयोजित ऑनलाइन हैकथॉन में कॉलेज की रैनबो-6 टीम देशभर के इंजीनियरिंग कॉलेजों के बीच विजेता बनी है।

रैनबो-6 टीम की ओर से प्रिडक्टिव मेंटेनेंस ऑफ बैट्री लाइफ ऑफ इलेक्ट्रिक व्हीकल्स पर प्रोजेक्ट प्रस्तुत किया गया। तमाम इंजीनियरिंग कॉलेज में एमआईटी की रैनबो-6 टीम के प्रोजेक्ट को सबसे बेहतर प्रोजेक्ट चुना गया। प्राचार्य डॉ.जेएन झा ने इसके लिए

बड़ी उपलब्धि

- एमआईटी की रैनबो-6 की टीम का देशभर में रहा दबदबा
- दिल्ली में एक से तीन अगस्त तक ऑनलाइन आयोजन

कॉलेज के शिक्षकों, रैनबो टीम को बधाई दी है। कहा कि इस उपलब्धि के लिए टीम को एक लाख रुपये मिलेंगे। यह एमआईटी के साथ बिहार के लिए भी बड़ी उपलब्धि है।

रैनबो-6 टीम में इलेक्ट्रिकल के 2018 बैच के लीडर अनुराग, 2017 बैच के उत्पल कांत, विद्या, 2018 बैच के आशीष कुमार, 2019 बैच के अमन सत्यम, आईटी के 2017 बैच के ऋषभ कुमार थे। कॉलेज के प्रो. आशीष कुमार, प्रो. मोहित कुमार व मैकेनिकल के प्रो. अंकित कुमार ने रैनबो-6 टीम का मार्गदर्शन किया।

प्रो. आशीष ने कहा कि छात्रों ने बिजली से चलने वाले वाहनों में इस्तेमाल होने वाली बैट्री के मेंटेनेंस से लेकर उसके संरक्षण के लिए एक एप विकसित किया। इसमें बैट्री कम समय में चार्ज करने के साथ इसकी खपत को घटाता है। बैट्री की स्थिति, चार्ज साइकल, एसी का स्टेटस, हेडलाइट और गाड़ी पर कितना लोड है, इससे पता चलता है।

छात्रों को मिलेंगे 1 लाख रुपए • देशभर के 400 से अधिक इंजीनियरिंग संस्थानों की टीम प्रतियोगिता में हुई शामिल

बैट्री मेंटेनेंस पर सॉफ्टवेयर बना एमआईटी ने लगातार दूसरे वर्ष जीती स्मार्ट इंडिया हैकथॉन ऑनलाइन प्रतियोगिता

एजुकेशन रिपोर्टर| मुजफ्फरपुर

एमआईटी के नाम एक और उपलब्धि जुड़ गई है। लगातार दूसरे वर्ष कॉलेज के छात्रों ने राष्ट्रीय स्तर पर आयोजित स्मार्ट इंडिया हैकथॉन प्रतियोगिता (सॉफ्टवेयर एडिशन) जीत ली है। दिल्ली में आयोजित इस प्रतियोगिता में एमआईटी की रेनबो-6 टीम ने ऊर्जा मंत्रालय की ओर से दिए गए समस्या पर प्रिडेक्टिव मेंटेनेंस ऑफ बैटरी लाइफ पर छात्रों ने इसका सॉफ्टवेयर सॉल्यूशन देकर यह खिताब अपने नाम किया है। प्रतियोगिता का आयोजन आईसीटीई ने किया था। अब इस मॉडल को रियलिस्टिक बनाया जाएगा। । मॉडल को डेवलप करने के लिए छात्रों को 1 लाख रुपए मिलेंगे। देश के 400 से अधिक इंजीनियरिंग संस्थानों की टीम ने इसमें हिस्सा लिया था। एमआईटी के प्राचार्य डॉ. जेएन झा ने इस उपलब्धि के लिए टीम और शिक्षकों को बधाई दी।

मॉडल के साथ एमआईटी की टीम।

टीम के सदस्य

अनुराग	इलेक्ट्रिकल	2018 बैच
उत्पल कांत	इलेक्ट्रिकल	2017 बैच
विद्या	इलेक्ट्रिकल	2017 बैच
आशीष कुमार	इलेक्ट्रिकल	2018 बैच
क्रयम कुमार	आईटी	2017 बैच
अमन सत्यम	इलेक्ट्रिकल	2019 बैच

मेंटर – आशीष कुमार (आईटी), मोहित कुमार (ईसी)
एडिशनल सपोर्ट – प्रो. अंकित कुमार सिंह (मेकेनिकल)

इलेक्ट्रिकल वेहिकल में इस्तेमाल होने वाली बैट्री की सॉफ्टवेयर से होगी मेंटेनेंस : छात्रों ने बिजली से चलने वाले वाहनों में इस्तेमाल होने वाली बैटरी मेंटेनेंस से लेकर उसके संरक्षण के लिए भी सॉफ्टवेयर विकसित किया। मेंटर प्रो. आशीष ने बताया कि सॉफ्टवेयर की मदद से बैट्री को कम समय में चार्ज करने के साथ खपत और तय की जाने वाली दूरी भी दिखेगी।

नहीं मिला इलेक्ट्रिकल वेहिकल तो बना दी इलेक्ट्रिकल साईकिल : लॉकडाउन के कारण एमआईटी टीम को काफी परेशानी हुई। इलेक्ट्रिकल वेहिकल नहीं मिलने पर छात्र उत्पलकांत ने जहानाबाद में अपने घर पर ही इलेक्ट्रिकल साईकिल बना ली। इसी का इस्तेमाल डाटा संग्रह के लिए किया गया। पूरी टीम प्रो. आशीष के घर 5 दिनों तक रह मॉडल को अंतिम रूप दिया।

अब आईपीआर में पेटेंट फाइल कराएगा मुजफ्फरपुर इंस्टीट्यूट ऑफ टेक्नोलॉजी, एनबीए एक्रीडिटेशन में मिलेगा फायदा

प्रतियोगिता में एक बार रनर और दो बार विनर बना एमआईटी

एजुकेशन रिपोर्टर|मुजफ्फरपुर

चार वर्ष से राष्ट्रीय स्तर पर आयोजित हो रही हैकथॉन प्रतियोगिता में एमआईटी एक बार रनर और लगातार दो बार विनर रहा। वर्ष 2017 से प्रतियोगिता की शुरुआत हुई, लेकिन उस वर्ष एमआईटी दावेदारी नहीं कर सका। वर्ष 2018 के सॉफ्टवेयर एडिशन में फाइनल स्टेज तक पहुंचे। इसके बाद वर्ष 2019 में बेंगलुरु में आयोजित हार्डवेयर एडिशन में पहला स्थान और 2020 में सॉफ्टवेयर एडिशन में पहला स्थान प्राप्त किया। इस वर्ष प्रतियोगिता में बिहार से एनआईटी पटना, बीआईटी पटना, एमआईटी मुजफ्फरपुर, बीसीई भागलपुर, बीसीई बख्तियारपुर और डीसीई दरभंगा ने हिस्सा लिया था। एमआईटी के प्राचार्य डॉ. जेएन झा ने बताया, संस्थान के लिए यह सुखद संकेत है।

उन्होंने बताया, एमआईटी का एनबीए से एक्रीडिटेशन होना है। राष्ट्रीय स्तर पर हासिल उपलब्धियों से कॉलेज को काफी फायदा होगा। उसे बेहतर अंक और ग्रेड मिलेंगे।

एक्सपेरिमेंट के दौरान जल गए थे सभी आइटम्स

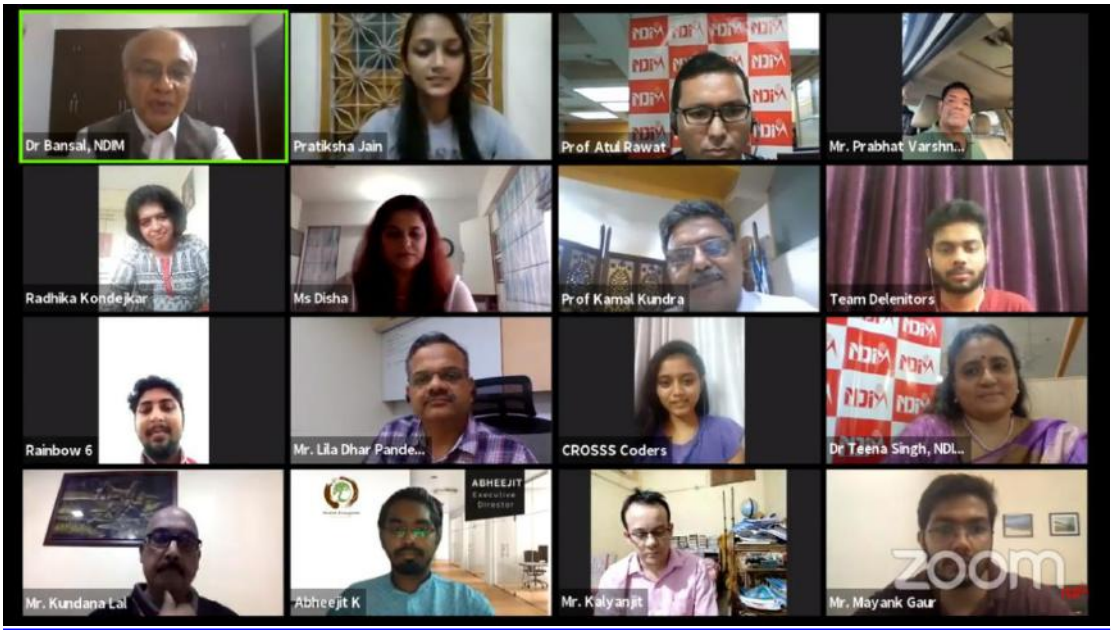
रेनेबो 6 के टीम मेंबर ने बताया, 1 अगस्त को एक्सपेरिमेंट के दौरान सभी इलेक्ट्रॉनिक्स आइटम जल गए। इससे टीम का मनोबल डगमगाने लगा, तब रात 11 बजे पटना से सभी सामान लेकर प्रो. अंकित सिंह और प्रो. आशीष कुमार आए। स्टोर कीपर की मदद से दोबारा उत्पल कांत ने इलेक्ट्रिक व्हीकल बनाया। इससे टीम में जोश का संचार हुआ।

आईपीआर में पेटेंट फाइल करेगा एमआईटी

सॉल्यूशन फॉर बैट्री लाइफ मॉनिटरिंग और प्रेडक्टिव मेंटेनेंस एंड बैट्री लाफ फॉर इलेक्ट्रिक व्हीकल विषय पर दिए गए सॉल्यूशन में इस्तेमाल तकनीक का अब पेटेंट कराया जाएगा। इसे लेकर एमआईटी की ओर से आईपीआर में पेटेंट फाइल होगा। इसकी प्रक्रिया शुरू हो गई है।

राइडिंग में एफिसिएंसी से लेकर सेफ्टी की मिलेगी जानकारी

पूरे आइडिया के तीन भाग हैं। इसमें राइडिंग की एफिसिएंसी, सेफ्टी समेत अन्य जानकारी मिलेगी। उदाहरण के लिए अगर मुजफ्फरपुर से कोई पटना जा रहा है तो रास्ते में किस तरह गाड़ी चलाई गई, ट्रैफिक, रोड की स्थिति, बैट्री की खपत, गाड़ी चलाने का तरीका, स्पीड कब घटी, कब बढ़ी समेत हर जानकारी की मॉनिटरिंग की जा सकेगी। इलेक्ट्रॉनिक्स डिपार्टमेंट के प्रो. मोहित कुमार ने बताया, एप के जरिए मोबाइल से इसे कंट्रोल किया जा सकता है। इससे दुर्घटनाओं में कमी आएगी।



Annexure 10.5

Muzaffarpur Institute of Technology, Muzaffarpur

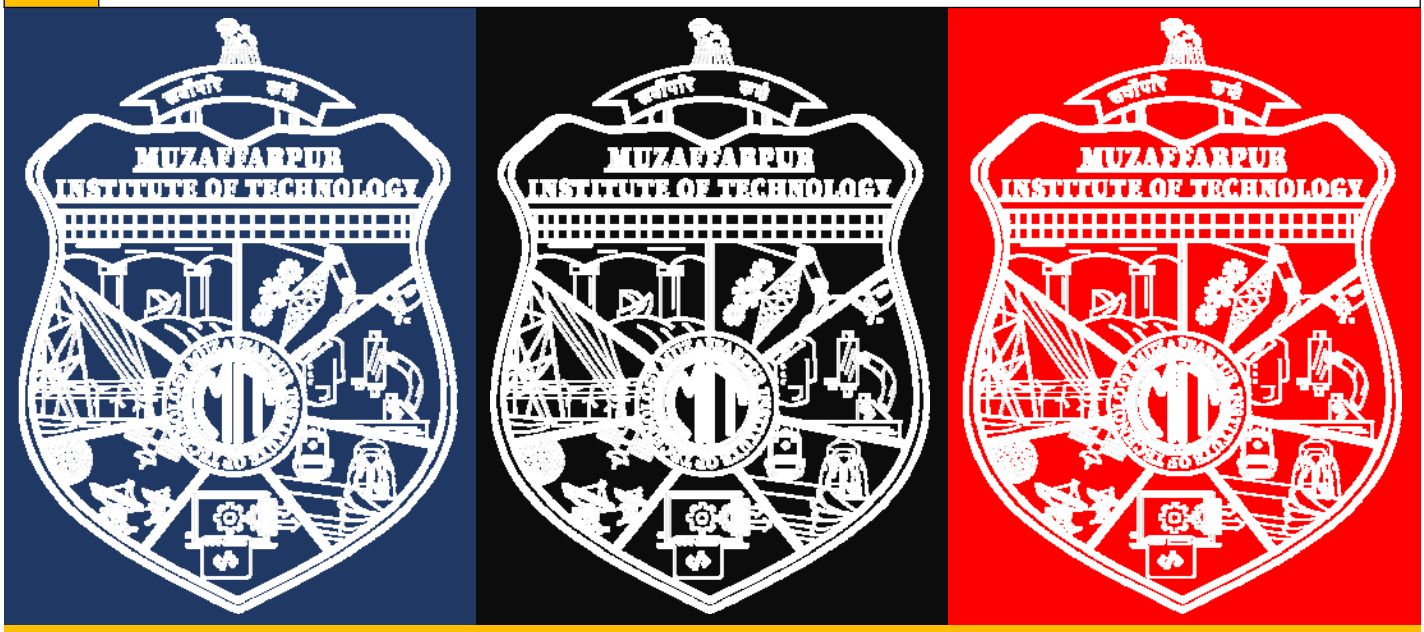
Institute Logo Redesigned

Event Start Date: - July 5th 2020
Submission End Date: - July 15th 2020
Rules and Guidelines for the Design (Attached)

List of Participants				
SI No.	**Name**	**College**	**Batch**	**Branch**
1	Aman Satyam	MIT, Muzaffarpur	2K19	EE
2	Anushka Kumari	MIT, Muzaffarpur	2K18	EE
3	Arpit Anand	MIT, Muzaffarpur	2K19	IT
4	Ashish Kumar Sinha	MIT, Muzaffarpur	2K18	EE
5	Chandan Kumar	GEC, Samastipur	2K19	EE
6	Kundan Kumar	MIT, Muzaffarpur	2K17	CE
7	Kundan Kumar	Gec, Samsatipur	2K19	EE
8	Nitish Kumar	RRSDC Begusarai	2K19	ME
9	Md Haidar Ali	MIT, Muzaffarpur	2K18	ME
10	Sahil Kumar	MIT Muzaffarpur	2K19	CE
11	Saubhik Kumar Mahto	MIT Muzaffarpur	2K17	ME
12	Sonu Saurabh	MIT, Muzaffarpur	2K18	CE
13	Sudhanshu Ranjan	MIT, Muzaffarpur	2K17	ME
14	Nitish Vishwakarma	RRSDC Begusarai	2K19	ME

Select Top Three Entries: -

1.	Submitted By:- Arpit Anand



Transparent Image (Background is set to blue/black/red to make it visible)

Colored Image

Black and White Image

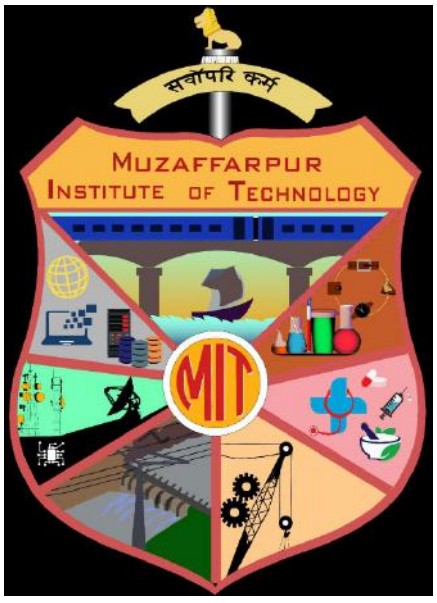
Select Top Three Entries: -

2.	Submitted By:- Saubhik Kumar Mahto

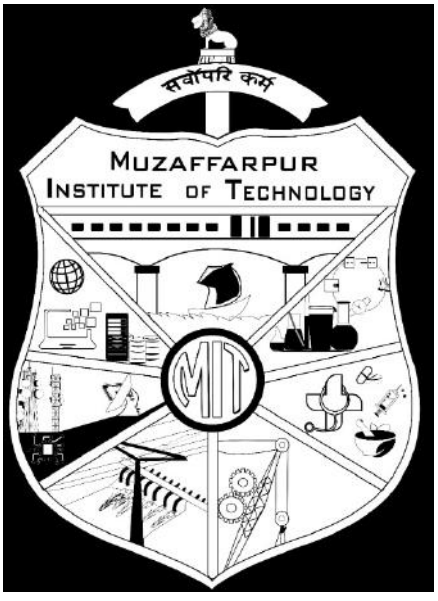
Colored Image

Black and White Image

3.	Submitted By:- Ashish Kumar Sinha



Colored Image



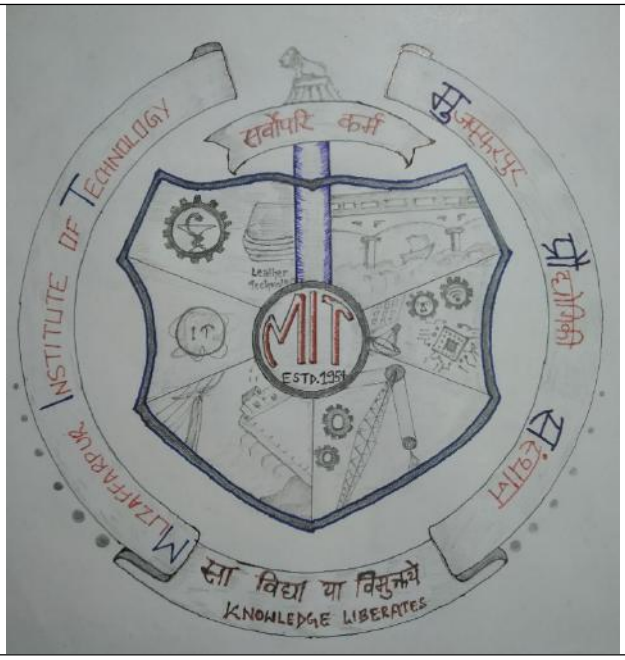
Black and White Image

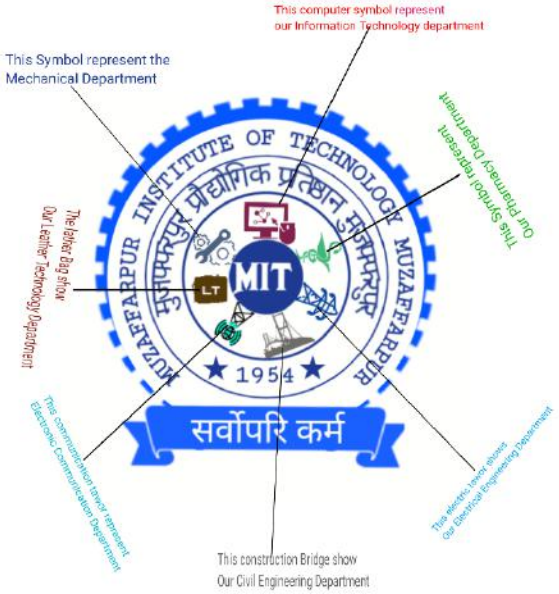
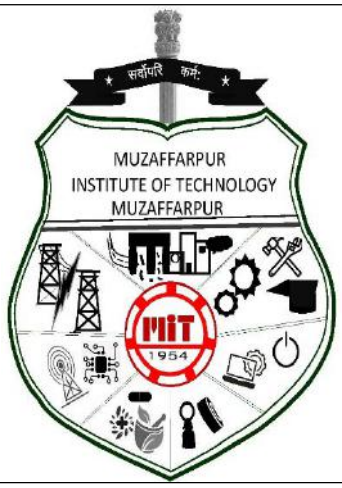
Muzaffarpur Institute of Technology, Muzaffarpur

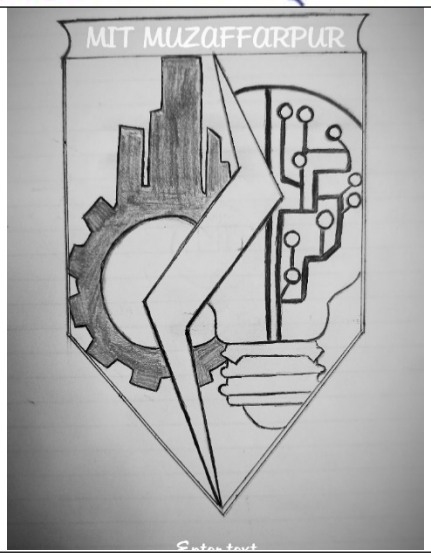
Institute Logo Redesigned

Other Entries – Rejected due to not following the rules of not disturbing the core design & layout, not good quality, no transparent variation and others

Rejected Entries due to not following the rules of not disturbing the core design & layout and other

Logo	Submitted By
	Aman Shatyam
	Anuska Kumari

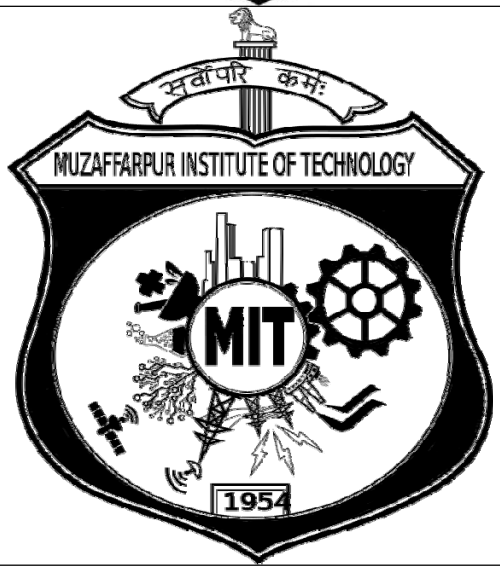
	
	Chandan Kumar
	Kundan Kumar

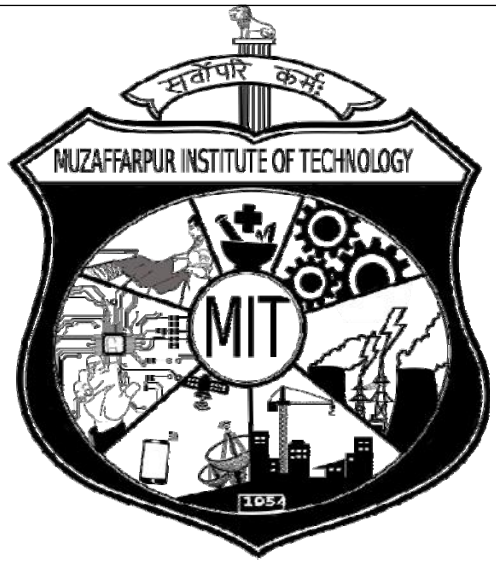
	Kundan Kumar
	Sahil Kumar

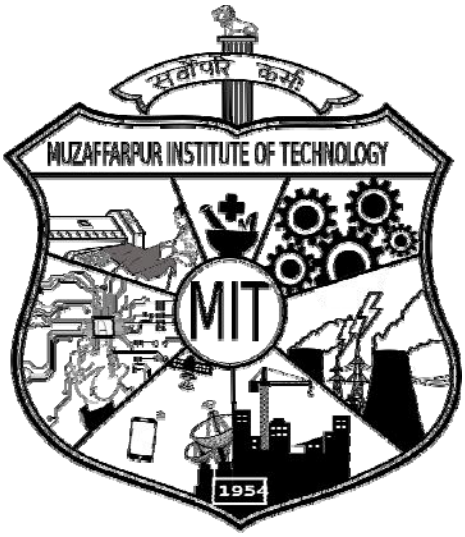
	Nitish Kumar
 	Hader Ali

Muzaffarpur Institute of Technology, Muzaffarpur

Institute Logo Redesigned

	
	Sonu Saurabh
	Sudhanshu Ranjan


सर्वोपरि कर्म
MUZAFFARPUR INSTITUTE OF TECHNOLOGY
MIT
1954


सर्वोपरि कर्म
MUZAFFARPUR INSTITUTE OF TECHNOLOGY
MIT
1954

 	Nitish Vishwakarma

Annexure-10.6 a					
Sl. No. as per the list	**Item name with brief description**	**Type**	**No. of units required**	**Unit Price (including GST)**	**Total cost (including GST)**
1	DIY STEM Tinkering Kit For Electronics Design And Prototyping - To Build 75+ Projects With ReusableModules Including Basic Components, Sensors, Inputs, Outputs, Wires, Connectors And Breadboard WithDetailed Project Manual And Audio-visuals.	Education Pack	5	3539	17695
2	DIY STEM Tinkering Kit For Arduino Programming, Design And Prototyping Using Arduino And Reusable Modules Including Basic Components, Inputs, Outputs, Wires, Connectors, And Breadboard With Detailed Project Manual And Audio-visuals.	Education Pack	5	3303	16515
3	DIY STEM Tinkering Kit Robotics Design And Prototyping - Build Multiple Real Time Robots And Remotes, In A One Of Its Kind Arrangement Using Reusable Modules Including Basic Components, Inputs, Outputs, Wires, Connectors, Electrical And Mechanical Accessories And Breadboard With Detailed Project Manual And Audio-visuals.	Education Pack	5	7079	35395
4	Basic DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 26 Innovations.	Education Pack	1	45363	45363
5	Advanced DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 48 Innovations.	Education Pack	1	69882	69882
6	DIY Solderable and Trainer Kit For Android Phone Speech Recognition Sensed Voice Operated Notice Board Display With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.	(1 Trainer) + (5 Solderable) DIY kits	1	68239	68239
15	DIY Solderable and Trainer Kit For Iot Based Home Automation Over The Cloud With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.	(1 Trainer) + (5 Solderable) DIY kits	1	50545	50545

16	Robotics DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 102 Innovations.	Education Pack (9 kits with 102 Innovations)	1	622685	622685
17	Internet of Things(IoT) based DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 190 Innovations.	Education Pack (14 kits with 190 Innovations)	1	812823	812823
19	Renewable energy based DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 41 Innovations.	Education Pack (5 kits with 41 Innovations)	1	242209	242209
					1981351

Annexure 10.6 b

S.No.	Item Name with Brief Specification	Detailed Specification	Quantity	Type	Estimated Cost/Unit in Rs.	Total Estimated in Rs. (A)	Sales tax and other taxes payable		Final Price (Rs.)
							In %	In figures (B)	(A+B)
1	DIY STEM Tinkering Kit For Electronics Design And Prototyping - To Build 75+ Projects With Reusable Modules Including Basic Components, Sensors, Inputs, Outputs, Wires, Connectors And Breadboard With Detailed Project Manual And Audio-visuals.	**Hardware Technical Specifications:** a. Material: Double sided PTH glass epoxy PCB for each module. b. Each discrete component duly mounted on micro PCBs forming a functional module, with breadboard compatible male pins for easy reuse with desired items such as resistors, capacitors, switches, transistors to play around basic circuits etc. c. Each category of modules to have different color for easy identification such as input modules, output modules, accessories etc. d. Power supply module to accept 5V DC from any charger of smart cell phone. e. Breadboard: One 840 points type breadboard having 2 horizontal set of lines both at top and bottom for feeding power. Also having 64 in (5x2) section vertical lines for developing any electronic circuit to be wired together with jumper wires and the building blocks. **List of Material:(x10 Sets)** 1. Power Indicator Module 1 No's 2. Power Supply Connector Unit Module 1 No's 3. Resistor 330R Module 3 No's 4. Buzzer Module 1 No's 5. Jumper wires As per Requirement	1	Education Pack (10 Kits)	29990	29990	18%	5398	35388

		6. Connector Modules 7 No's 8. 7. Touch Point Module 1 No's 9. Breadboard Module 1 No's 10. Push Button Switch Module 3 No's 11. White LED 10mm Module 1 No's 12. BC 547 NPN Transistor Module 2 No's 13. Micro USB Charger Module 1 No's 14. RGB LED Module 1 No's 15. Dual LED Module 1 No's 16. DC motor Module 1 No's 17. Motor fan Module 1 No's 18. Slide Switch Module 3 No's 19. Flashing LED Module 1 No's 20. LDR Sensor Module 1 No's 21. Reed Sensor Module 1 No's 22. Resistor 1K Module 2 No's 23. BC 557 PNP Transistor Module 1 No's 24. Resistor 10K Module 1 No's 25. Project Guide Book 1 No's **Project Guide Specification:** a. Detailed documentation booklet covering all modules offered b. Circuit Diagram: Complete circuit diagram suggested for beginners with its full explanations of the modules used. c. Fritzing Diagram: Detailed Fritzing diagram with rows and columns duly numbered for mounting each module on the breadboard. d. Physical Image: Exact physical image of the breadboard containing the building blocks and jumper wire as per the circuit. e. Function: Each module to have explanations on its function in relation to the circuit diagram. f. Self explained program codes wherever applicable							

		g. Assembly and Troubleshooting document h. Possible Activities and experiments details i. Audio Visual explanation on clearly understanding the breadboard, assembly and its use and explaining different concepts. (Refer Annexure 2 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
2	Basic DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 26 Innovations.	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner.	1	Education Pack (10 Kits - 26 Innovations)	384430	384430	18%	69197	453627

		i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas							

		List of Material:(x10 Sets) **Breakout Boards** 1.Arduino Nano Development: Motherboard: Qty:1 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:1 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:1 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.96 White LED Array-12V Cluster of 96 bright white LEDs in series parallel combination having provision for input signal (I/p) to be driven by a built-in MOSFET from 12V DC source upon signal / PWM signal from any microcontroller. Requires 12v DC							

		5.Buzzer Amplifier Module Very little / tini input signal at I/p amplified by a transistor (BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing 6.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 7.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 8.Flame Sensor Qty:1 Signal from a Flame sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 9.LDR Sensor Module with Logic Output: Changing light intensity sensed by LDR(Light Dependant Resistor) and then amplified by a transistor to develop logic output (O/p) with precise adjustment by variable resistor 10K Preset. Requires 5V DC 10.LCD Module for 4 Bit Input Module: Qty:1 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input &							

		3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Female Reliments, **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. Innovation Kit Shell Qty:1 (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with**							

		the product.							
3	Advanced DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 48 Innovations.	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-	1	Education Pack (10 Kits - 48 Innovations)	592220	592220	18%	106600	698820

		isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:(x10 Sets)** **Breakout Boards** 1.Arduino Nano Development: Motherboard: Qty:1 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading							

		for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:1 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:1 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.WiFi Module using ESP8266 Qty:1 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 5. 5 Load Relay Driver Module Qty:1 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources							

		6.IR Photodiode Interrupting Module Qty:1 IR diode (IR LED)and photodiode (PHOTODIODE) face each other. Photodiode receives beamed light light from IR. While it encounters any object interrupting the beam the Photodiode develops a signal which is amplified by a transistor to develop logical output based on adjustable limits by 10K PRESET .Requires 5v DC. Applications in visitor counting and robotic sensing arrangement using microcontroller board and other necessary peripherals. 7.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 8.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 9.Flame Sensor Qty:1 Signal from a Flame sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 10.LDR Sensor Module with Logic Output: Changing light intensity sensed by LDR(Light Dependant Resistor) and then amplified by a transistor to develop logic output (O/p) with precise adjustment by variable resistor 10K Preset. Requires 5V DC							

		11.LCD Module for 4 Bit Input Module: Qty:1 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Female Reliments, Lamp, Lamp Holder **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements.							

		Innovation Kit Shell Qty:1 (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
4	DIY Solderable and Trainer Kit For Wireless Power Transfer With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy. b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Primary 1. Resistor 150R 1 No's 2. Resistor 330R 1 No's 3. Resistor 1K 3 No's 4. Resistor 3.3K 2 No's 5. Capacitor 1000uF/35V 1 No's 6. Capacitor 10uF/35V 1 No's 7. Capacitor 0.1uF(ceramic)104 1 No's 8. Capacitor 0.1uF/400V Polyster 2 No's 9. Capacitor 0.01uF(ceramic)103 2 No's 10. Diode 1N4007 4 No's 11. Diode 1N4148 1 No's	1	(1 Trainer) + (5 Solderable) DIY kits	41450	41450	18%	7461	48911

		12. Red LED 1 No's 13. Yellow LED 1 No's 14. 555 Timer IC 1 No's 15. 7805 Voltage Regulator 1 No's 16. 8 Pin IC Base 1 No's 17. MOSFET IRFZ44 1 No's 18. Heat Sink For MOSFET 1 No's 19. Screw Nut For Heat Sink 1 No's 20. Transistor BC547 1 No's 21. PCB Connector 2-Pin 1 No's 22. Male Reliment 2-Pin 1 No's 23. TRANSFORMER 230/0-12V,1A 1 No's 24. Power Cord 1 No's 25. Primary Coil- 5cm in Diameter, 26 Guage, 35 Turns 1 No's 26. Dedicated PCB 1 No's Secondary 27. Resistor 330R 1 No's 28. Resistor 1K 1 No's 29. Capacitor 1000uF/35V 1 No's 30. Capacitor 0.1uF/400V Polyster 2 No's 31. Diode 1N4148 8 No's 32. Diode 1N4007 2 No's 33. Red LED 1 No's 34. Yellow LED 1 No's 35. 7805 Voltage Regulator 1 No's 36. PCB Connector 2-Pin 3 No's 37. Male Header 2-Pin 2 No's 38. Primary Coil- 5cm in Diameter, 26 Guage, 45 Turns 1 No's 39. 12V SMPS Fan 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract							

		c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explanations g. Soldering and Assembly procedure h. Troubleshooting document i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit**: 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
5	DIY Solderable and Trainer Kit For	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy.	1	(1 Trainer) + (5	39625	39625	18%	7133	46758

	Optimum Energy Management System With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** 1. Resistor 330R 11 No's 2. Resistor 100R 2 No's 3. Resistor 100R/2W 2 No's 4. Resistor 2.2K 5 No's 5. Resistor 3.3K 2 No's 6. Resistor 10K 4 No's 7. Resistor 100K 2 No's 8. Resistor 1K 6 No's 9. Preset 10K 2 No's 10. Capacitor 470uF/35V 1 No's 11. Capacitor 10uF/63V 2 No's 12. Capacitor 33pF Ceramic 2 No's 13. Capacitor 100uF/35V 4 No's 14. Capacitor 1uF/63V 2 No's 15. Capacitor 0.1uF (104) Ceramic 4 No's 16. Capacitor 0.01uF (103) Ceramic 4 No's 17. 7805 Voltage Regulator 1 No's 18. 7809 Voltage Regulator 1 No's 19. AT89S52 1 No's 20. 555 TIMER 4 No's		Solderable) DIY kits					

		21. 40-PIN IC BASE 1 No's 22. 08-PIN IC BASE 4 No's 23. Transistor BC547 7 No's 24. Diode 1N4007 5 No's 25. CRYSTAL 11.0592MHz 1 No's 26. LAMP 1 No's 27. LAMP HOLDER 1 No's 28. LED-RED 5 No's 29. 12V RELAY 1 No's 30. 2 PIN PUSH BUTTON 1 No's 31. 7 SEGMENT LED COMMON ANODE 2 No's 32. POWER CORD 1 No's 33. TRANSFORMER 0-12V 1 No's 34. TSOP1738 RECEIVERS 2 No's 35. PCB CONNECTOR 2-PIN 2 No's 36. MALE BURGE 2-PIN 1 No's 37. FEMALE BURGE 2PIN (For Transformer) 1 No's 38. AC CONNECTOR 2-PIN 1 No's 39. HEAT SINK 1 No's 40. SCREW NUT FOR HEAT-SINK 1 No's 41. IR LED 2 No's 42. COPPER WIRE FOR LOAD 1 No's 43. PLAIN PCB 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explanations g. Soldering and Assembly procedure h. Troubleshooting document							

		i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
6	DIY Solderable and Trainer Kit For Closed Loop Control for a Brushless DC Motor to Run at the Exactly Entered Speed With Complete Product Manual Hard And Soft	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy. b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of	1	(1 Trainer) + (5 Solderable) DIY kits	43905	43905	18%	7903	51808

	Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** 1. Resistor 330R 2 No's 2. Resistor 220R 1 No's 3. Resistor 1K 1 No's 4. Resistor 2.2K 1 No's 5. Resistor 10K 1 No's 6. Preset 10K 2 No's 7. Resistor 22R 1 No's 8. Resistor 100R 1 No's 9. Capacitor 470uF/35V 1 No's 10. Capacitor 10uF/63V 2 No's 11. Capacitor 33pF Ceramic 2 No's 12. Diode 1N4007 5 No's 13. Diode 1N4148 1 No's 14. 7805 Voltage Regulator 1 No's 15. AT89S52 1 No's 16. MCT2E IC 1 No's 17. 40-PIN IC BASE 1 No's 18. 06-PIN IC BASE 1 No's 19. Transistor BC547 1 No's 20. Transistor BC558 1 No's 21. MOSFET IRFZ44 1 No's 22. 11.0592MHz CRYSTAL 1 No's 23. LED-RED 1 No's 24. IR LED 1 No's 25. PHOTO DIODE 1 No's 26. POWER CORD 1 No's							

		27. TRANSFORMER 0-12V 1 No's 28. LCD 16X2 1 No's 29. FEMALE BURGE 16-PIN 1 No's 30. MALE BURGE 16 PIN(INCLUDED WITH LCD) 1 No's 31. FEMALE BURGE2 PIN (For Transformer) 1 No's 32. MALE BURGE2 PIN 1 No's 33. PCB CONNECTOR 2 PIN 1 No's 34. HEAT SINK 1 No's 35. KEYPAD 4X3 1 No's 36. 2PIN PUSH BUTTON 1 No's 37. RELEMENT MALE7-PIN 1 No's 38. RELEMENT FEMALE 7-PIN ONE SIDE (INCLUDED WITH KEYPAD) 1 No's 39. 12V DC FAN 1 No's 40. PLAIN PCB 1 No's 41. SOLDERING LED (50 gm) 1 No's 42. CONNECTING WIRE 1 No's 43. SCREW NUT FOR HEAT-SINK 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explanations g. Soldering and Assembly procedure h. Troubleshooting document i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype.							

		l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
7	DIY Solderable and Trainer Kit For Load Control over GSM with User Programmable Number Features With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy. b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):**	1	(1 Trainer) + (5 Solderable) DIY kits	128515	128515	18%	23133	151648

		(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set) 1. Resistor 330R 1 No's 2. Resistor 1K 4 No's 3. Resistor 10K 1 No's 4. Resistor 10K SIP 1 No's 5. Preset 10K 1 No's 6. Capacitor 470uF/35V 1 No's 7. Capacitor 10uF/63V 2 No's 8. Capacitor 1uF/63V 4 No's 9. Capacitor 33pF Ceramic 2 No's 10. 7805 Voltage Regulator 1 No's 11. AT89S52 1 No's 12. ULN2003 IC 1 No's 13. MAX232 IC 1 No's 14. MCT2E IC 1 No's 15. 40-PIN IC BASE 1 No's 16. 06-PIN IC BASE 1 No's 17. 16-PIN IC BASE 2 No's 18. Diode 1N4007 4 No's 19. RED-LED 5 No's 20. CRYSTAL11.0592MHz 1 No's 21. TRANSFORMER 0-12V 1 No's 22. AC CONNECTOR2-PIN 1 No's 23. LAMP 4 No's 24. LAMP HOLDER 4 No's 25. ENERGY METER 1 No's 26. BULB 100W 1 No's 27. BULB HOLDER 1 No's 28. FEMALE RELEMENT 29. 2-PIN ONE SIDED(INCLUDED IN ENERGY METER) 1 No's 30. 2-PIN PUSH BUTTON 1 No's							

		31. 12V RELAY 4 No's 32. GSM MODEM 1 No's 33. ADAPTER 1 No's 34. DB9 MALE CONNECTOR 1 No's 35. DB9 STRAIGHT CODE 1 No's 36. HEAT SINK 1 No's 37. SCREW NUT FOR HEAT-SINK 1 No's 38. LCD16X2 1 No's 39. FEMALE BURGE 16-PIN 1 No's 40. MALE BURGE 16-PIN(INCLUDED with LCD) 1 No's 41. FEMALE BURGE 2-PIN(For Transformer) 1 No's 42. MALE BURGE 2-PIN 1 No's 43. MALE RELIMET 2-PIN 1 No's 44. PCB CONNECTOR 2-PIN 5 No's 45. POWER CORD 1 No's 46. COPPER WIRE FOR LOAD 1 No's 47. PLAIN PCB 1 No's 48. SOLDERING LEAD (50gm) 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explanations g. Soldering and Assembly procedure h. Troubleshooting document i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype.							

		l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
8	DIY Solderable and Trainer Kit For Iot Based Home Automation Over The Cloud With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy. b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):**	1	(1 Trainer) + (5 Solderable) DIY kits	42834	42834	18%	7710	50544

		(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set) 1. Resistor 330R 1 No's 2. Resistor 1K 1 No's 3. Resistor 470R 1 No's 4. Resistor 150R 1 No's 5. Resistor 100R/2W 1 No's 6. Capacitor 0.1uF/400V 1 No's 7. LM1117 Voltage Regulator 1 No's 8. MOC3021 IC 1 No's 9. 06 Pin Base 1 No's 10. ESP8266 1 No's 11. 5V SMPS 1 No's 12. Switch 1 No's 13. Power Cord 1 No's 14. Heat Sink 1 No's 15. Screw Nut For Heat-Sink 1 No's 16. PCB Connector 3-Pin 1 No's 17. BT136 TRIAC 1 No's 18. Female Header 4-Pin 2 No's 19. Dedicated PCB 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explanations g. Soldering and Assembly procedure h. Troubleshooting document i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided							

		k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
9	DIY Solderable and Trainer Kit For for TV Remote Operated Domestic Appliances Control With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection	1	(1 Trainer) + (5 Solderable) DIY kits	42834	42834	18%	7710	50544

	Sustainable Cities and Communities	with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 150R, Resistor 1K, SIP Resistor 10K, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, 7805 Voltage Regulator AT89C2051, ULN2003 IC, 20-Pin IC Base, 16-Pin IC Base, Diode 1N4007, CRYSTAL 11.0592MHz, LAMP, LAMP HOLDER, LED-RED, 12V RELAY, 2-PIN PUSH BUTTON, POWER CORD, TRANSFORMER 0-12V, MALE BURGE 2-PIN, AC CONNECTOR 2-PIN, PCB CONNECTOR 2-PIN, TSOP 1738, TV REMOTE WITH CELLS PH17, HEAT SINK, SCREW NUT FOR HEAT-SINK, COPPER WIRE FOR LOAD, ASSEMBLED PCB (WORKING),PLAIN PCB,CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas							

		Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
10	DIY Solderable and Trainer Kit For for Password Based Circuit Breaker With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components**.** **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R,Resistor 10K,Resistor 1K,Preset 10K,Resistor 10K SIP,Capacitor 1000uF/35V, Capacitor 10uF/63V,Capacitor 33pF Ceramic,7805 Voltage Regulator,AT89S52,ULN2003 IC,40-Pin IC Base,16-Pin IC Base,Diode 1N4007,CRYSTAL 11.0592MHz,KEYPAD 4x3 MATRIX,LAMP,LAMP HOLDER,LCD 16X2,LED-RED,12V RELAY,4 PIN PUSH BUTTON,POWER CORD,TRANSFORMER 0-12V,FEMALE BURGE 16-PIN,MALE BURGE 16-PIN (INCLUDED WITH LCD),RELEMENT MALE 7-PIN,RELEMENT FEMALE 7-PIN ONE SIDE (INCLUDED WITH KEYPAD),MALE BURGE 2-PIN,FEMALE BURGE 2-PIN (For Transformer),PCB CONNECTOR 3-PIN,AC CONNECTOR 2-PIN,HEAT SINK,SCREW NUT FOR HEAT-SINK,COPPER	1	(1 Trainer) + (5 Solderable) DIY kits	47118	47118	18%	8481	55599

		WIRE FOR LOAD,PLAIN PCB,SOLDERING LED (50 gm),CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
11	DIY Solderable and Trainer Kit For for Programmable Load Shedding Time Management For Utility Department With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components.	1	(1 Trainer) + (5 Solderable) DIY kits	38550	38550	18%	6939	45489

	focuses on SDG:11 Sustainable Cities and Communities. This Kit focuses on SDG:11 Sustainable Cities and Communities	**List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Resistor 2.2K, Resistor 100R, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 1uF/25V, 7805Voltage Regulator, AT89S52, DS1307 IC, 40-PIN IC BASE, 08-PIN IC BASE, Diode 1N4007, Transistor BC547, CRYSTAL 11.0592MHz, CRYSTAL 32.768KHz, KEYPAD 4X3, LAMP, LAMP HOLDER, LED-RED, 12V RELAY, 7-SEGMENT COMMON ANODE, 2 PIN PUSH BUTTON, POWER CORD, TRANSFORMER 0-12V, RELEMENT MALE 7-PIN, RELEMENT FEMALE 7-PIN ONE SIDE(INCLUDED WITH KEYPAD), MALE BURGE 2-PIN, FEMALE BURGE 2-PIN (For Transformer), PCB CONNECTOR 3-PIN, AC CONNECTOR 2-PIN, HEAT SINK, SCREW NUT FOR HEAT-SINK, COPPER WIRE FOR LOAD, PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype.							

		Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
12	DIY Solderable and Trainer Kit For for Street Light that Glows on Detecting Vehicle Movement With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Preset 10K, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, 7805 Voltage Regulator, AT89S52, 40-Pin IC Base, Transistor BC547, Diode 1N4007, PHOTODIODE, CRYSTAL 11.0592MHz, LED-RED, LED-WHITE, LED-SPACERS, IR-LED, POWER CORD, TRANSFORMER 0-12V, 2 PIN PUSH BUTTON, SLIDE SWITCH, HEAT SINK, SCREW NUT FOR HEAT-SINK, MALE BURGE 2-PIN, FEMALE BURGE 2-PIN (For Transformer), PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition	1	(1 Trainer) + (5 Solderable) DIY kits	46047	46047	18%	8288	54335

		Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
13	DIY Solderable and Trainer Kit For for Minimizing Penalty In Industrial Power Consumption By Engaging Apfc Unit With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG:11 Sustainable Cities and Communities. This Kit focuses on SDG:11 Sustainable Cities and	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 3.3K, Resistor 4.7K,	1	(1 Trainer) + (5 Solderable) DIY kits	59970	59970	18%	10795	70765

	Communities	Resistor 22K, Resistor 1K, Resistor 10R/10W, Preset 10K, Resistor 10K SIP, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uf(104) ceramic Capacitor 2uF/400V, 7805 Voltage Regulator, 7812 Voltage Regulator, AT89S52, LM339 IC, ULN2003 IC, 40-PIN IC BASE, 16-PIN IC BASE, 14-PIN IC BASE, Diode 1N4007, Diode 1N4148, CRYSTAL 11.0592MHz, LED-RED, 2-PIN PUSH BUTTON, BULB 100W, BULB HOLDER, CHOKE,TRANSFORMER (0-12V 500mA), 12V RELAY, LCD 16X2,PCB CONNECTOR 2-PIN, SLIDE SWITCHES, POWER CORD, AC CONNECTOR 2-PIN, TRANSFORMER12V, 1 AMPERE, MALE BURGE 2-PIN, FEMALE BURGE 2-PIN, FEMALE BURGE 16-PIN, MALE BURGE 16-PIN (INCLUDED WITH LCD), HEAT SINK, SCREW NUT FOR HEAT-SINK, COPPER WIRE FOR LOAD, PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available.								

		Relevant Software and Firmware to be supplied along with the product.							
14	DIY Solderable and Trainer Kit For for Detecting Power Grid Synchronization Failure on Sensing Frequency or Voltage Beyond Acceptable Range With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 47, Resistor 27K, Resistor 10K, Resistor 6.8K, Resistor 4.7K, Resistor 100K, Resistor 33K, Resistor 1K, Resistor 2.2K, Preset 10K, Preset 100K, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 2.2uF/63V, Capacitor 0.1uF (104) Ceramic, 7805 Voltage Regulator, AT89S52, LM339 IC, LM358 IC, 555 TIMER IC, 40-Pin IC Base, 08-Pin IC Base, 14-Pin IC Base, Diode 1N4007, Transistor BC547, Transistor BC557, CRYSTAL 11.0592MHz LED-RED, 2-PIN PUSH BUTTON, LAMP, LAMP HOLDER, 12V RELAY,LCD 16X2, PCB CONNECTOR 2-PIN, SLIDE SWITCH, POWER CORD, TRANSFORMER 12V, AC CONNECTOR 2-PIN, MALE BURGE 2-PIN, FEMALE BURGE 2-PIN (For Transformer), FEMALE BURGE 16-PIN, MALE BURGE 16-PIN (INCLUDED WITH LCD), HEAT	1	(1 Trainer) + (5 Solderable) DIY kits	42834	42834	18%	7710	50544

		SINK, SCREW NUT FOR HEAT-SINK, COPPER WIRE FOR LOAD, PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
15	DIY Solderable and Trainer Kit For for Solar Powered Led Street Light With Auto Intensity Control. For simple technical and functional understanding of the challenge. This Kit is focuses on SDG:11 Sustainable Cities and	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components.	1	(1 Trainer) + (5 Solderable) DIY kits	47118	47118	18%	8481	55599

	Communities.	**List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Resistor 2K, Resistor 2.2K, Preset 5K, Preset 22K, Resistor 18K, Resistor 82K, Resistor 15K, Resistor 10R, Resistor 660K, Resistor 120K, Resistor 100K, Resistor 270K, Resistor 22K, Resistor 33K, Resistor 1M, Resistor 10R/2W, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF (104) Ceramic, Capacitor 2.2uF/50V, Capacitor 22uF/50V, AT89S52, LM324 IC, 40 Pin IC Base, 14 Pin IC Base, Diode 1N4007, Diode 1N4148, RED LED, WHITE LED, GREEN LED, 2-PIN PUSH BUTTON, 11.0592MHz CRYSTAL, BATTERY 6V, BC547, SL100, IRF630 (MOSFET), IRFZ44, SLIDE SWITCH, PCB CONNECTOR 2-PIN, SOLAR PANEL(6V), PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas							

		Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
16	DIY Solderable and Trainer Kit For for Solar Power Charge Controller With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Resistor 2K, Resistor 2.2K, 5K PRESET, 22K PRESET, Resistor 18K, Resistor 82K, Resistor 15K, Resistor 10R, Resistor 660K, Resistor 120K, Resistor 100K, Resistor 270K, Resistor 22K, Resistor 33K, Resistor 1M, Capacitor 0.1uF (104) Ceramic, Capacitor 2.2uF/50V, Capacitor 22uF/50V, LM324 IC, 14PIN IC BASE, Diode 1N4007, Diode 1N4148, RED LED, WHITE LED, GREEN LED, BATTERY 6V, BC547, SL100, IRFZ44, SLIDE SWITCH, PCB CONNECTOR 2-PIN, SOLAR PANEL(6V), PLAIN PCB, SOLDERING LEAD (50gm), CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition	1	(1 Trainer) + (5 Solderable) DIY kits	45984	45984	18%	8277	54261

		Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
17	DIY Solderable and Trainer Kit For for Four Quadrant Dc Motor Speed Control With Microcontroller With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 22R, Resistor 330R, Resistor 10K, Capacitor	1	(1 Trainer) + (5 Solderable) DIY kits	39621	39621	18%	7132	46753

		10uF/63V, Capacitor 33pF Ceramic, AT89S52, L293D IC, 40-PIN IC BASE, 16-PIN IC BASE, Diode 1N4007, 2-PIN FEMALE RELEMENT ONE SIDE, CRYSTAL11.0592MHz, LED-RED, 2-PIN PUSH BUTTONS, MALE BURGE 2-PIN, MALE RELEMENT 2-PIN, F PLAIN PCB, SOLDERING LED (50 gm), CONNECTING WIRE, HIgh Speed DC Motor **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
18	DIY Solderable and Trainer Kit For for Four Quadrant Dc Motor Control Without Microcontroller With Complete Product Manual Hard And Soft	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary.	1	(1 Trainer) + (5 Solderable) DIY kits	40692	40692	18%	7325	48017

	Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 1K, Resistor 4.7K, Resistor 10K, Preset 10K, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 100uF/25V, Capacitor 0.1uF (104) Ceramic, 7805 Voltage Regulator, 7404 IC, 555 IC, L293D IC, 16 Pin IC BASE, 14 Pin IC BASE, 08 Pin IC BASE, Transistor BC547, Transistor BC557, Diode 1N4007, LED-RED, TRANSFORMER0-12V, POWER CORD, HEAT SINK, SCREW NUT FOR HEAT-SINK, MALE BERGE2-PIN, FEMALE BERGE2-PIN, MALE RELIMET2-PIN, FEMALE RELIMET 2-PIN ONE SIDE, 12V 2C0 RELAY, 12V HIGH SPEED MOTOR, HIGH SPEED MOTOR FAN, 2-PIN PUSH BUTTON, SLIDE SWITCH, SOLDER LEAD-50GM, PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit							

		Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
19	DIY Solderable and Trainer Kit For for Rf Based Home Automation System With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Transmitter Resistor 330R, Resistor 10K, Resistor 100K, Resistor 1M, AT89C2051, HT12E IC, 20 Pin IC Base, 18 Pin IC Base, Capacitor 10uF/63V, Capacitor 33pF Ceramic,Diode 1N4007, LED-RED, Female Burge 4-PIN, 2 PIN PUSH BUTTONS, CRYSTAL11.0592Mhz, RF Transmitter Module4-PIN, ANTENNA, FEMALE RELEMENT2 PIN, MALE RELIMET2 PIN, SLIDE SWITCH (ON/OFF), 4 CELL CASE, 1.5V CELL, PLAIN PCB, SOLDERING LED (50 gm), CONNECTING WIRE	1	(1 Trainer) + (5 Solderable) DIY kits	61041	61041	18%	10987	72028

		Receiver Resistor 100R, Resistor 150R, Resistor 330R, Resistor 1K, Resistor 10K, Resistor 68K, Resistor 100R/2W, Resistor 10KSIP, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF/400V Polyester, 7805 Voltage Regulator, AT89S52, MOC3063 IC, HT12D IC, 06 Pin IC BASE, 18 Pin IC BASE, 40 Pin IC BASE, Diode 1N4007, Transistor BC547, LED-RED, CRYSTAL11.0592MHz, TRANSFORMER0-12V, 2-PIN, MALE BERGE, FEMALE BERGE2-PIN, 2 PIN PUSH BUTTON, FEMALE BURGE4-PIN, RF RECEIVER8-PIN, BT136, PCB CONNECTOR2-PIN, LAMP, LAMP HOLDER, AC CONNECTOR2-PIN, PLAIN PCB, COPPER WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							

20	DIY Solderable and Trainer Kit For for Self-Switching Power Supply With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 1K, Resistor 6.2K, Resistor 6.8K, Preset 1K, Capacitor 10uF/63V, Capacitor 100uF/35V, Capacitor 1000uF/35V, Diode 1N4007, Transistor BC547, Transistor BC557, Transformer (0-12V), Power cord, Red led, 7805 Voltage Regulator,12 volt auto lamp, 12V relay, Spst toggle switch, 2-pin push button, Male reliment (2-pin), Female reliment(2-pin), 2 pin PCB connector, Connecting wire, Dedicated PCB **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided	1	(1 Trainer) + (5 Solderable) DIY kits	28155	28155	18%	5068	33223

		Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
21	DIY Solderable and Trainer Kit For for Home Automation By Android Application Based Remote Control With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 100R, Resistor 100R/2W, Resistor 150R, Resistor 330R, Resistor 10K, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF/400V Polyester, 7805 Voltage Regulator, AT89S52, MOC3063 IC, 6 Pin IC BASE, 40 Pin IC BASE, Diode 1N4007, BLUETOOTH DEVICE, LED-RED, CRYSTAL 11.0592MHz, TRANSFORMER 0-12V, POWER CORD, MALE BERGE 2-PIN, FEMALE BERGE 2-PIN, 4-pin 1-side female reliment, 2 PIN PUSH BUTTON, BT136, PCB CONNECTOR 2-PIN,	1	(1 Trainer) + (5 Solderable) DIY kits	51402	51402	18%	9252	60654

		LAMP, LAMP HOLDER, AC CONNECTOR 2-PIN, PLAIN PCB, COPPER WIRE, SOLDERING LED (50 gm), CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
22	DIY Solderable and Trainer Kit For for Arduino based Underground Cable Fault Detection With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection	1	(1 Trainer) + (5 Solderable) DIY kits	54615	54615	18%	9831	64446

	focuses on SDG: 9 Industry, Innovation and Infrastructure	with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 1K, Resistor 330R, Preset 10K, Capacitor 10uF/63V, Capacitor 470uF/35V, Capacitor 0.1uF, ULN2003 IC, 7805 Voltage Regulator, 16 PIN IC BASE, LED-RED, Diode 1N4007, ARDUINO MODULE, MALE BURGE 12-PIN, FEMALE RELEMENT ONE PIN TWO SIDE , 12V RELAY, SLIDE SWITCH, LCD16X2, FEMALE BURGE16-PIN, MALE BURGE16-PIN(INCLUDED IN LCD), FEMALE BURGE 2-PIN(For Transformer), MALE BURGE 2-PIN, TRANSFORMER 0-12V, POWER CORD, HEAT SINK, SCREW NUT FOR HEAT-SINK, PLAIN PCB, SOLDERING LED (50 gm), CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available.							

		Relevant Software and Firmware to be supplied along with the product.							
23	DIY Solderable and Trainer Kit For for Solar Inverter With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistors-22R,47R,560R,1K,10K,20K,100R/2W,1K PRESET, Capacitors-1000uF/50V,4700uF/35V,2.2uF/63V,0.1uF (104) Ceramic,0.01uF (103) Ceramic,0.001uF (102) Ceramic,0.1uF/1000V,10uF/63V, SG3524, IR2101, 16 Pin BASE, 08 Pin BASE, Transistors, IRFZ44, Diodes, 1N4007, 1N4148, 16V ZENER DIODE, RED-LED, BATTERY 12V 7AH, SOLAR PANEL 12V 3W, INVERTER TRANSFORMER(0-6V/230V, 100VA), HEAT SINK, SCREW NUT FOR HEAT SINK, MALE BERGE 12-PIN, PCB CONNECTOR 2-PIN, PCB CONNECTOR 3-PIN, INCANDESENT BULB 100W, BULB HOLDER, PLAIN PCB, SOLDERING LED (50 gm), CONNECTING WIRE, COPPER WIRE **Project Guide Technical Specification:**	1	(1 Trainer) + (5 Solderable) DIY kits	72822	72822	18%	13108	85930

		Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
24	DIY Solderable and Trainer Kit For for Voice Controlled Home Appliances With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)**	1	(1 Trainer) + (5 Solderable) DIY kits	53544	53544	18%	9638	63182

		Resistor 100R, Resistor 100R/2W, Resistor 150R, Resistor 330R, Resistor 10K, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF/400V Polyester, 7805, AT89S52, MOC3063 IC, 06 Pin IC BASE, 40 Pin IC BASE, Diode 1N4007, BLUETOOTH DEVICE, LED-RED, CRYSTAL 11.0592MHz, TRANSFORMER 0-12V, POWER CORD, MALE BERGE 2-PIN, FEMALE BERGE 2-PIN, 4-pin 1-side female reliment, 2 PIN PUSH BUTTON, BT136, PCB CONNECTOR 2-PIN, LAMP, LAMP HOLDER, AC CONNECTOR 2-PIN, PLAIN PCB, COPPER WIRE, SOLDERING LED (50 gm), CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
25	DIY Solderable and Trainer Kit For for	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy.	1	(1 Trainer) + (5	58899	58899	18%	10602	69501

	Solar Water Pump Control With Four Different Time Slots For Power Saving Applications With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit focuses on SDG:11 Sustainable Cities and Communities	High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Resistor 2.2K, Resistor 100R, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 1uF/25V, 7805Voltage Regulator, AT89S52, DS1307 IC, 40-PIN IC BASE, 08-PIN IC BASE, Diode 1N4007, Transistor BC547, CRYSTAL 11.0592MHz, CRYSTAL 32.768KHz, KEYPAD 4X3, LAMP, LAMP HOLDER, LED-RED, 12V RELAY, 7-SEGMENT COMMON ANODE, 2 PIN PUSH BUTTON, POWER CORD, TRANSFORMER 0-12V, RELEMENT MALE 7-PIN, RELEMENT FEMALE 7-PIN ONE SIDE(INCLUDED WITH KEYPAD), MALE BURGE 2-PIN, FEMALE BURGE 2-PIN (For Transformer), PCB CONNECTOR 3-PIN, AC CONNECTOR 2-PIN, HEAT SINK, SCREW NUT FOR HEAT-SINK, COPPER WIRE FOR LOAD, PLAIN PCB, CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation		Solderable) DIY kits					

		Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
26	DIY Solderable and Trainer Kit For for Solar Highway Lighting System With Auto Turn Off In Daytime With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Resistor 2K, Resistor 2.2K, 5K PRESET, 22K PRESET, Resistor 18K, Resistor 82K, Resistor 15K, Resistor 10R, Resistor 660K,	1	(1 Trainer) + (5 Solderable) DIY kits	51402	51402	18%	9252	60654

		Resistor 120K, Resistor 100K, Resistor 270K, Resistor 22K, Resistor 33K, Resistor 1M, Resistor 10R/2W, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF (104) Ceramic, Capacitor 2.2uF/50V, Capacitor 22uF/50V, AT89S52, LM324 IC, 40 PIN IC BASE, 14PIN IC BASE, Diode 1N4007, Diode 1N4148, RED LED, WHITE LED, GREEN LED, LDR Sensor, 2-PIN PUSH BUTTON, 11.0592MHz CRYSTAL, BATTERY 6V, BC547, SL100, IRFZ44, SLIDE SWITCH, PCB CONNECTOR 2-PIN, SOLAR PANEL(6V), PLAIN PCB, SOLDERING LEAD (50gm), CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
27	DIY Solderable and Trainer Kit For for	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy.	1	(1 Trainer) + (5	50331	50331	18%	9060	59391

	Wireless Home Appliance Like Fan Speed Control Using Rf Communication. This Kit is focuses on SDG:11 Sustainable Cities and Communities With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit focuses on SDG:11 Sustainable Cities and Communities	High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Transmitter Resistors 330R, 10K, 100K, 1M, Integrated circuits AT89C2051, HT12E, IC Bases 20 Pin Base 18 Pin Base, Capacitors 10uF/63V, 33pF Ceramic, Diodes 1N4007, LED-RED, Miscellaneous Female Burge 4-PIN, 2 PIN PUSH BUTTONS, CRYSTAL 11.0592Mhz, RF Transmitter Module 4-PIN, ANTENNA, FEMALE RELEMENT 2 PIN, MALE RELIMET 2 PIN, SLIDE SWITCH (ON/OFF), 4 CELL CASE, 1.5V CELL, PLAIN PCB, SOLDERING LED(50gm), Receiver RESISTORS 330R, 10K, 1K, 6.8K, 4.7K, 150R, 100R/2W, CAPACITORS 470uF/35V, 10uF/63V, 33pF Ceramic, 0.1uF/630V, 0.1uF, Integrated Circuits AT89S52, MOC3021, LM358, HT12D, IC BASES 40 PIN BASE, 08 PIN BASE, 06 PIN BASE, 18 PIN BASE, DIODES 1N4007, 1N4148, RED LED, MISCELLANOUS BC547, FEMALE BURGE 4 PIN, RF RECEIVER 8 PIN, 7805, 4-PIN PUSH BUTTON, 2-PIN PUSH BUTTON, 11.0592MHz CRYSTAL, TRIAC (BT136), PCB CONNECTOR 2-PIN, 0-12V TRANSFORMER, POWER CORD, AC CONNECTOR, MALE BURGE 2 PIN, FEMALE BURGE 2 PIN (For transformer), CONNECTING WIRE, COPPER WIRE FOR		Solderable) DIY kits					

		LOAD, LAMP, LAMP HOLDER, PLAIN PCB, SOLDERING LEAD (50gm) **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
28	DIY Solderable and Trainer Kit For for Remote Monitoring Of Transformer / Generator Health Over Internet With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components.	1	(1 Trainer) + (5 Solderable) DIY kits	62112	62112	18%	11180	73292

	Industry, Innovation and Infrastructure	**List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 100R, Resistor 10K, Resistor 1K, Resistor 22k, 1K PRESET, 10K PRESET, 500 PRESET, Resistor 10R/10W, Capacitor 470 UF/35V, Capacitor 100UF/63V, Capacitor 10UF/63V, Capacitor 33PF CERAMIC, Diode 1N4007, Diode 3.3V ZENER, AT89S52, ADC0808 IC, 7805 REGULATOR, LM1117 REGULATOR, 40-PIN IC BASE, 28-PIN IC BASE, ESP8266 WIFI MODULE, SLIDE SWITCH, FEMALE BURGE 4-PIN, 16X2 LCD, FEMALE BURGE 16-PIN, MALE BURGE 16-PIN, LED-RED, 2-PIN PUSH BUTTON, TRANSFORMERS (0-12) V 500mA, LM-35 TEMPERATURE SENSOR, CRYSTAL 11.0592MHZ, 2-PIN MALE BURGE, FEMALE RELEMENT 2-PIN 1-SIDE, TRANSFORMER(0-12) V 750mA, POWER CORD 2-PIN, PCB CONNECTORS, 100WATT BULB, BULB HOLDER, HEAT SINK, SCREW NUT FOR HEAT SINKS, COPPER WIRE FOR LOAD, PLAIN PCB, CONNECTING WIRE, SCREW DRIVER **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit							

		Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
29	DIY Solderable and Trainer Kit For for Energy Meter Reading over Internet With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG:11 Sustainable Cities and Communities. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 1K, Resistor 10K, Resistor 10K SIP, Preset 10K, Capacitor 470uF/35V, Capacitor 10uF/63V, Capacitor 1uF/63V, Capacitor 33pF Ceramic, 7805 Voltage Regulator, AT89S52, MAX232 IC, 40-PIN IC BASE, LDR, Diode 1N4007, RED-LED, CRYSTAL11.0592MHz, TRANSFORMER 0-12V, AC CONNECTOR2-PIN, ENERGY METER, BULB 100W, BULB HOLDER, FEMALE RELEMENT, 2-PIN ONE SIDED(INCLUDED IN ENERGY METER), 2-PIN PUSH BUTTON, GSM MODEM, ADAPTER, DB9 MALE CONNECTOR, DB9 STRAIGHT	1	(1 Trainer) + (5 Solderable) DIY kits	113520	113520	18%	20434	133954

		CODE, HEAT SINK, SCREW NUT FOR HEAT-SINK,LCD16X2, FEMALE BURGE 16-PIN, MALE BURGE 16-PIN(INCLUDED with LCD), FEMALE BURGE 2-PIN(For Transformer), MALE BURGE 2-PIN, MALE RELIMET 2-PIN, POWER CORD, COPPER WIRE FOR LOAD, PLAIN PCB, SOLDERING LEAD (50gm) **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
30	DIY Solderable and Trainer Kit For for Solar Energy Measurement System With Complete Product Manual Hard And Soft Copy (1 Trainer + 5	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary.	1	(1 Trainer) + (5 Solderable) DIY kits	44976	44976	18%	8096	53072

	DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 1K, Resistor 3.3K, Resistor 5.1K, Resistor 20K, Resistor 100R/5W, Resistor 10R/10W, Preset 10K, Preset 100K, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF (104) Ceramic, Capacitor 22pF Ceramic, PIC16F877A, 40 Pin Base, 7805 Voltage Regulator, Diode 1N4007, 5.1V Zener Diode, Red LED, LM35 Temperature Sensor, 2-Pin Push Button, Crystal 4MHz, Transformer 0-12V, Power Cord, Male Header 2 Pin, Female Header 2 Pin (For Transformer), LCD 16X2, Female Header 16 Pin, Male Header 16 Pin (Included with LCD), LDR 16x2, Solar Panel 6V 3W, PCB Connector 2-Pin, Dedicated PCB **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally							

		building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
31	DIY Solderable and Trainer Kit For for Bidirectional Rotation of an Induction Motor with a Remote Control Device With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R, Resistor 10K, Resistor 1K, Resistor 10K SIP, Preset 10K, Capacitor 1000uF/35V, Capacitor 10uF/25V, Capacitor 33pF Ceramic, 7805 Voltage Regulator, AT89S52, ULN2003 IC, 40-Pin IC Base, 16-Pin IC Base, Diode 1N4007, CRYSTAL 11.0592MHz, LAMP, LAMP HOLDER, TSOP, LED-RED, 12V RELAY, TV Remote, AA Cell, 4 PIN PUSHBUTTON, POWER CORD, TRANSFORMER 0-12V, PCB CONNECTORS 3-PIN, MALE HEADER 2-PIN, FEMALE HEADER 2-PIN (For Transformer), AC CONNECTOR 2 PIN, HEAT SINK, SCREW NUT FOR HEAT-SINK, COPPER WIRE FOR LOAD, PLAIN PCB,	1	(1 Trainer) + (5 Solderable) DIY kits	42519	42519	18%	7653	50172

		CONNECTING WIRE **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product..**							
32	DIY Solderable and Trainer Kit For Auto Selection of any Available Phase, in 3 Phase Supply System With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit is focuses on SDG: 9 Industry, Innovation	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components.	1	(1 Trainer) + (5 Solderable) DIY kits	66396	66396	18%	11951	78347

	and Infrastructure	**List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 1K 8 No's Resistor 330R 1 No's Resistor 2.2K 4 No's Resistor 12K 1 No's Resistor 10K 4 No's Capacitor 100uF/35V 4 No's Capacitor 470uF/35V 1 No's Capacitor 10uF/63V 1 No's MCT 2E IC 4 No's 7805 Voltage Regulator 1 No's 4069 IC 1 No's 4081 IC 1 No's ULN2003 IC 1 No's 14 Pin Base 2 No's 16 Pin Base 1 No's 06 Pin Base 4 No's Diode 1N4007 10 No's LED-Red 2 No's LED- Yellow 1 No's LED-- Green 1 No's LED- White 1 No's Transformer 0-12V 4 No's 3C/O Relay 4 No's PCB Connector 3-Pin 1 No's PCB Connector 2-Pin 2 No's AC Connector 4-Pin 1 No's Male Header 2-Pin 4 No's Female Header 2-Pin (For Transformers) 4 No's Lamp 1 No's Lamp Holder 1 No's							

		RYB-N Wire Connecting Wire 1 No's Copper Wire For Load 1 No's Dedicated PCB 1 No's **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product..**							
33	DIY Solderable and Trainer Kit For Automatic Star Delta Starter using Relays and Adjustable Electronic Timer For Induction Motor With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection	1	(1 Trainer) + (5 Solderable) DIY kits	54615	54615	18%	9831	64446

	per specification. This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 1K 6 No's Resistor 10K 1 No's Preset 10K 1 No's Capacitor 1000uF/35V 1 No's Capacitor 470uF/35V 1 No's Capacitor 10uF/63V 3 No's 555 Timer 1 No's 8 Pin Base 1 No's Diode 1N4007 16 No's Diode 1N4148 1 No's TransistorBC547 1 No's Transistor BC557 1 No's LED-Red 3 No's LED-Green 1 No's Transformer 0-12V 3 No's 12V Relay 2 No's 3C/0-Relay 2 No's Male Header 2 Pin 3 No's Female Header 2 Pin (For Transformers) 3 No's PCB Connector 3 Pin 1 No's PCB Connectors 2-Pin 3 No's Lamps 6 No's Lamp Holders 6 No's AC Connector 4-Pin 1 No's RYB-N Wire 1 No's Copper Wire For Load 1 No's Dedicated PCB 1 No's							

		Project Guide Technical Specification: Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product..**							
34	DIY Solderable and Trainer Kit For Electronic Soft Start For 3 Phase Induction Motor With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered**	1	(1 Trainer) + (5 Solderable) DIY kits	49260	49260	18%	8867	58127

		components 1 set) Resistor 560R 6 No's Resistor 1K 7 No's Resistor 2.2K 3 No's Resistor 3.3K 3 No's Resistor 4.7K 9 No's Resistor 10K 6 No's Resistor 22K 6 No's Resistor 27K 1 No's Resistor 100K 3 No's Resistor 2.2M 2 No's Resistor 100R/2W 3 No's Capacitor 470uF/35V 1 No's Capacitor 10uF/63V 1 No's Capacitor 2.2uF/25V 4 No's Capacitor 0.47uF (470nF) Polyester 2 No's Capacitor 0.1uF/400V Polyester 3 No's Diode 1N4007 21 No's Diode 1N4148 5 No's 7812 Voltage Regulator 1 No's LM339 IC 2 No's LM324 IC 1 No's MOC3021 IC 6 No's 14-Pin Base 3 No's 06-Pin Base 6 No's Transistor BC557 4 No's Transistor BC547 3 No's Push Button 2-Pin 1 No's Transformer 0-12V, 500mA 3 No's LED-Red 2 No's LED-Yellow 1 No's LED-Green 1 No's Male Header 2-Pin 3 No's							

		Female Header 2-Pin (For Transformers) 3 No's Heat Sink 7 No's Screw Nut For Heat-Sink 7 No's SCR (TYN612 OR TYN 616) 6 No's PCB Connectors 3-Pin 2 No's Lamp 6 No's Lamp Holder 6 No's RYB-N Wire Connecting Wire 1 No's Copper Wire For Load 1 No's Dedicated PCB 1 No's **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product..**							
35	DIY Solderable and Trainer Kit For Phase Sequence Checker For	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied.	1	(1 Trainer) + (5 Solderable	30297	30297	18%	5453	35750

	Three Phase Supply With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R 1 No's Resistor 1K 2 No's Resistor 10K 3 No's Resistor 18K 12 No's Resistor 100K 3 No's Resistor 220R 8 No's Capacitor 470uF/35V 1 No's Capacitor 10uF/63V 3 No's Capacitor 1uF/25V 1 No's Capacitor 0.1uF (104) Ceramic 3 No's Capacitor 33PF 2 No's 7805 Voltage Regulator 1 No's 7812 Voltage Regulator 1 No's 4011 IC 1 No's 555 IC 1 No's AT89C2051 1 No's 14 Pin Base 1 No's 08 Pin Base 1 No's 20-Pin Base 1 No's Diode 1N4007 7 No's 12V Zener Diode 3 No's		) DIY kits					

		Crystal 11.0592 MHz 1 No's Transistor BC547 1 No's LED-Red 2 No's White LED 8 No's Transformer 0-12V 1 No's Male Header 2-Pin 1 No's 2-Pin Push Button 1 No's Banana Base R Y B N 4 No's Banana Clip R Y B N 4 No's R Y B N Wire 1 No's Dedicated PCB 1 No's **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product..**							
36	DIY Solderable and Trainer Kit For Three	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy.	1	(1 Trainer) + (5	56757	56757	18%	10216	66973

	Phase Fault Analysis with Auto Reset On Temporary Fault And Permanent Trip Otherwise With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 220R 3 No's Resistor 10K 5 No's Resistor 1K 8 No's Resistor 4.7K 1 No's Resistor 2.2K 2 No's Resistor 100K 1 No's Resistor 330R 1 No's Preset 10K 1 No's Capacitor 1000uF/35V 1 No's Capacitor 100uF/25V 7 No's Capacitor 220uF/25V 1 No's Capacitor 10uF/63V 2 No's Capacitor 100nF (0.1uF) (104) Ceramic 3 No's 555 Timer IC 2 No's LM358 IC 1 No's 7805 Voltage Regulator 1 No's 8-PinS IC Base 3 No's Diode 1N4007 15 No's Transistor BC547 1 No's TransformerS 0-12V, 500mA 6 No's		Solderable) DIY kits					

		2 Pin Push Buttons 6 No's Lamps 6 No's Lamp Holders 6 No's 12V Relays 6 No's 3C/O Relay 1 No's LED-Red 6 No's LED-Yellow 2 No's LED-Green 2 No's Male Header 2-Pin 6 No's Female Header 2-Pin 6 No's PCB Connectors 3-Pin 2 No's AC Connector 4-Pin 1 No's R Y B - N Wire Connecting Wire 1 No's Dedicated PCB 1 No's **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with**							

		the product..							
37	DIY Solderable and Trainer Kit For Ultra Fast Acting Electronic Circuit Breaker With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R 1 No's Resistor 150R 1 No's Resistor 1K 4 No's Resistor 2.2K 1 No's Resistor 10K 3 No's Resistor 10R/10W 1 No's Preset 10K 2 No's Resistor 10K SIP 1 No's Capacitor 1000Uf/35V 1 No's Capacitor 10uF/63V 4 No's Capacitor 33pF Ceramic 2 No's 7805 Voltage Regulator 2 No's AT89S52 1 No's LM324 IC 1 No's MOSFET IRFZ44 1 No's 40 Pin IC Base 1 No's 14 Pin IC Base 1 No's	1	(1 Trainer) + (5 Solderable) DIY kits	40692	40692	18%	7325	48017

		Diode 1N4007 8 No's LED-Red 2 No's Bulb 100W 2 No's Bulb Holder 2 No's 4-Pin Push Button 1 No's Slide Switch 1 No's Power Cord 1 No's Transformer 0-12V 1 No's Crystal 11.0592MHz 1 No's 12V Relay 1 No's LCD 16X2 1 No's Female Header 16 Pin 1 No's Male Header 16 Pin (Included with LCD) 1 No's Male Header 2 Pin 1 No's Female Header 2 Pin 1 No's PCB Connector 2 Pin 2 No's AC Connector 2 Pin 1 No's Heat Sinks 1 No's Screw Nut For Heat-Sink 1 No's Copper Wire For Load 1 No's Dedicated PCB 1 No's **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit							

		Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product..**							
38	**Smart Cities Automation DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 266 Innovations.** Smart Cities-Light Control/Smart Cities-Automation/Load Control based Projects: a)Microcontroller/Ardui	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male	1	Education Pack (16 kits with 266 Innovations)	1073652	1073652	18%	193257	1266909

	no based Programmable sequential Load Switching Control by zero voltage triggered through opto isolators SCR/TRIAC/Relay using Push Button and communication links RF/Bluetooth b)Microcontroller/Arduino based Auto Power Supply Control from 4 Different Sources using zero voltage triggered through opto isolators SCR/TRIAC/Relay c)Sensor based Tank Water Level Controller by zero voltage triggered through opto isolators SCR/TRIAC/Relay using without and with Microcontroller/Arduino d)Microcontroller/Arduino based Random On/off of Lamps to Detect Burglars for Locked Houses by zero voltage triggered through opto isolators SCR/TRIAC/Relay	pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:**							

	e)555 Timer based Delay Operated Load / Touch on and Off Switch / Wire Loop Breaking Alarm using without micrcontroller by zero voltage triggered through opto isolators SCR/TRIAC/Relay f)Load Control through programmed WiFi and opto isolator feeding SCR/TRIAC/Relay by SCR/TRIAC/Relay Through IoT over cloud and Android Apps from Any Smartphone for standalone mode g)Load Control through programmed microcontroller/Arduino and ZVS triggered opto isolator feeding SCR/TRIAC/RelayUsing WiFI by SCR/TRIAC/Relay Through Android Apps from Any Smartphone h)Microcontroller/Arduino based Optimum Energy Management System /Object/ Visitor	Breakout Boards 1.Arduino Nano Development: Motherboard: Qty:18 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:17 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:16 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.MAX232 Board +DB9 Male Qty:4 Equipped with MAX232 IC ,and DB9 male, Serial communication from RFID, GSM, GPS etc to microcontroller through (Rx,Tx) can be established . Needs 5V DC and straight serial cord (DB9) for interface. 5.MAX232 Board+DB9 Female Qty:2							

	Counter Display / Overload Alarm Warning System by zero voltage triggered through opto isolators SCR/TRIAC/Relay i)Microcontroller/Arduino based Load Control System by zero voltage triggered through opto isolators SCR/TRIAC/Relay using Communication links over GSM/RF/Bluetooth/DTMF/TV Remote/PC/ IoT/Keypad/Voice/Push Button with Induction Motor/Bulb j)Microcontroller/Arduino based Bidirectional Rotation of an Induction Motor with a Remote Control Device by zero voltage triggered through opto isolators SCR/TRIAC/Relay using communication links GSM/RF/BLuetooth/DTMF/TV Remote/PC/Voice/Push	Equipped with MAX232 IC ,and DB9 male, Serial communication from microcontroller (Rx,Tx) to PC / Laptop can be established . Needs 5V DC and straight serial cord (DB9) for interface. 6. 5 Load Relay Driver Module Qty:15 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources 7.DTMF Encoder with Binary Output Qty:2 Module accepts input DTMF (Dual Tone Multi Frequency) tones for 8870 buffered by 7404 to develop 4 bit binary data (D0 to D3) for any microcontroller program to recognise the tones digitally for further action 8.433 MHz RF+HT12E Encoder Qty:4 Complete RF transmitter module with encoder (HT12) to take 8 bit hardware selected adjustable address data and 4 bit soft data(D0 to D3) from any microcontroller to develop serial data O/P for the RF transmitter to transmit over a distance of 50 meters. 9.433 MHz RF+HT12D Decoder Qty:4 Complete receiver module with decoder to develop 4 bit soft data(D0 to D3) based on 8 bit matching hardware adjusted address data for any microcontroller while receiving corresponding serial data at DATA from the RF transmitter within 50 meters from the transmitter.							

	Button k)Room Temperature Control/Sprinkler Start/Smart Dustbin over programmed WiFi and opto isolator feeding SCR/TRIAC/Relay Through IoT over cloud and Android Apps l)Microcontroller/Arduino based Speed Checker to Detect Rash Driving on Highways by zero voltage triggered through opto isolators SCR/TRIAC/Relay m)Microcontroller fed ADC/Arduino interfaced dummy cable with dummy fault creation features at selected distances to cross check the accuracy of underground cable fault with local display and monitored aslo over the cloud in IOT management. n)Microcontroller/Arduino based Life Cycle	10.TSOP Module Qty:2 38 KHz modulated IR signal receiving sensor to develop logical output at O/p while faced with an obstacle ahead.Has also wide applications in IR remote signal sensing. Needs 5 V DC 11.ZVS Optocoupler+Four Back to Back SCR Qty:15 Four independent back to back connected SCR pair with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated optocoupler.It is used for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 12.ZVS Optocoupler + Four TRIACS Qty:15 Four independent triac with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated ZVS optocoupler.Suitable for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 13.LCD Module for 4 Bit Input Module: Qty:11 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC 14.Buzzer Amplifier Module Qty:3 Very little / tini input signal at I/p amplified by a transistor (BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing							

	Testing of Electrical Loads /Warning System for Limit Cross Operation by Down Counter by zero voltage triggered through opto isolators SCR/TRIAC/Relay o)IR Obstacle sensor for Detection to Actuate Load / LED Light / Electronic Letter Box / Smart Fan in Office / Panic Alarm without and with Microcontroller/Arduino p)IR sensors fed to programmed microcontroller/Arduino for Zone wise Density based Traffic Signal System both in time sequence & Remote Override features of Traffic Signal in Emergency including smart parking Parking Allotment with Display	15.IR Photodiode Pair Reflecting Module: Qty:6 IR diode (IR LED) & and photodiode (PHOTODIODE) placed side by side to receive reflected light while it faces any object ahead. Received light on the Photodiode is amplified by a transistor to develop logical output (O/p) with precise setting by a variable resistor 10K Preset.Requires 5 v Dc. Applications in RPM counting,and robotic sensing arrangement 16. 555 Module in Astable Mode: Qty:2 Free running oscillator for any frequency setting ideally upto 500 KHz or more till 2 MHz upon RC (R2 & C) time constant and by variable resistor (R2 Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 17.8051+ADC0804 Development Motherboard: Qty:1 8051 motherboard with all standard connections having all ports open ended with one of the port internally wired for using single channel ADC 0804 .Use female to female jumper wires for interfacing to peripherals. Requires 5 volt Dc 18.Underground Cable Fault Detection Sensor: Qty:1 Equivalent to a 3 phase 4 wire (R,Y,B,Gnd) underground cable made on a PCB with 12 fault creating switches (SLIDE SWITCHES) and indexed cable resistance ,on individual phases at every designated extrapolated kilometer to feed the output to an ADC to forms as an input to a microcontroller board for calculating the fault distance in KMs.It needs additionally control circuit board using microcontroller, relay board, LCD display unit etc to complete the project in full. Needs 5v DC 19.WiFi Module using ESP8266 Qty:3							

		8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 20.Keypad 4x3 Qty:1 12 push buttons wired in matrix format ideally suitable for interfacing to microcontroller or tone decoder IC 21.Zero Voltage Sensing Module: Qty:1 Needs pulsating DC of about 12v & 5V DC to develop 5 V narrow pulses at zero cross of waveform using dual OP AMP LM358. Having dual OP AMPs it can be used both for voltage and current as well (ZVS1,ZVS2). 22.4 Way Traffic Junction Module A 4 way traffic junction signal lighting system with red, green and amber LEDs in all four sides of a street junction terminated at connectors.Requires appropriate feed from any programmed microcontroller to complete a traffic junction project.Does not include microcontroller. 23.4 in 1- Segment Display Qty:1 4 parallel 7 segment common cathode display driven from any 8 pin port at J1 with 4 segment selection control input at J2. 24.555 in Monostable Mode Qty:1 In this 555 Timer is used in monostable mode ie one shot pulse based upon RC (R & C) time constant and by variable resistor (RV Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC.							

		25.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 26.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Bluetooth,TV Remote, Adapter, Stereo Mobile Pin,.Connector DB9 Straight Cord, AA cell case, Lamp Holder, Bluetooth Module, GSM Module, 2.4 RF Module, Temperature Sensor, Etc **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low							

		cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. **Innovation Kit Shell Qty:1** (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
39	**Smart Cities Audit DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 303 Innovations.** Smart Cities-Energy Billing/Smart Cities-	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male	1	Education Pack (7 kits with 303 Innovations)	655265	655265	18%	117948	773213

	Automatic PF Control/Phase Control based Projects: a)Microcontroller/Arduino based Energy Meter Billing with Load Control by zero voltage triggered through opto isolators SCR/TRIAC/Relay using Communication links over GSM with User Programmable Number Features b)Microcontroller/Arduino based Voltage current sensed Enegry Auditing for Load Survey/Prepaid Energy Meter ZVS triggered opto isolator feeding SCR/TRIAC/Relay /Power Theft/Tampered Energy Meter using communication link GSM network c)Microcontroller/Arduino based Voltage current sensed automatic power factor correction ZVS triggered opto isolator	and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in							

	feeding SCR/TRIAC/Relay using communication link GSM network and IoT over the cloud besides watching the parameters on built in mini DSO d)Microcontroller/Arduino managed Galvanically isolated phase angle control using SCR/TRIAC and 7 Segment/LCD and communicating over GSM/RF/Bluetooth/DTMF/TV from IR Remote/PC/Keypad/Push Button operating loads like incandscent lamp/Induction Motor besides watching the parameters on built in mini DSO e)GSM network / RF / IOT managed smart and remote energy meter reading f)Over Voltage or Under Voltage or over current/load detection with Circuit breaker/Trip	relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:** Breakout Boards 1.Arduino Nano Development: Motherboard: Qty:18 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:17 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:16 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.MAX232 Board +DB9 Male Qty:4 Equipped with MAX232 IC ,and DB9 male, Serial							

	Mechanism by zero voltage triggered through opto isolators SCR/TRIAC/Relay using without and with Microcontroller/Arduino g)Transformer Health Monitoring of several analog parameters by ADC interface programmed microcontroller/Arduino through ZVS triggered opto isolator feeding SCR/TRIAC/Relay using communication link GSM network/PC/2.4GHz band and IoT over the cloud	communication from RFID, GSM, GPS etc to microcontroller through (Rx,Tx) can be established . Needs 5V DC and straight serial cord (DB9) for interface. 5.MAX232 Board+DB9 Female Qty:2 Equipped with MAX232 IC ,and DB9 male, Serial communication from microcontroller (Rx,Tx) to PC / Laptop can be established . Needs 5V DC and straight serial cord (DB9) for interface. 6. 5 Load Relay Driver Module Qty:15 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources 7.DTMF Encoder with Binary Output Qty:2 Module accepts input DTMF (Dual Tone Multi Frequency) tones for 8870 buffered by 7404 to develop 4 bit binary data (D0 to D3) for any microcontroller program to recognise the tones digitally for further action 8.433 MHz RF+HT12E Encoder Qty:4 Complete RF transmitter module with encoder (HT12) to take 8 bit hardware selected adjustable address data and 4 bit soft data(D0 to D3) from any microcontroller to develop serial data O/P for the RF transmitter to transmit over a distance of 50 meters. 9.433 MHz RF+HT12D Decoder Qty:4 Complete receiver module with decoder to develop 4 bit soft							

		data(D0 to D3) based on 8 bit matching hardware adjusted address data for any microcontroller while receiving corresponding serial data at DATA from the RF transmitter within 50 meters from the transmitter. 10.TSOP Module Qty:2 38 KHz modulated IR signal receiving sensor to develop logical output at O/p while faced with an obstacle ahead.Has also wide applications in IR remote signal sensing. Needs 5 V DC 11.ZVS Optocoupler+Four Back to Back SCR Qty:15 Four independent back to back connected SCR pair with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated optocoupler.It is used for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 12.ZVS Optocoupler + Four TRIACS Qty:15 Four independent triac with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated ZVS optocoupler.Suitable for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 13.LCD Module for 4 Bit Input Module: Qty:11 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC							

		14.Buzzer Amplifier Module Qty:3 Very little / tini input signal at I/p amplified by a transistor (BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing 15.IR Photodiode Pair Reflecting Module: Qty:6 IR diode (IR LED) & and photodiode (PHOTODIODE) placed side by side to receive reflected light while it faces any object ahead. Received light on the Photodiode is amplified by a transistor to develop logical output (O/p) with precise setting by a variable resistor 10K Preset.Requires 5 v Dc. Applications in RPM counting,and robotic sensing arrangement 16. 555 Module in Astable Mode: Qty:2 Free running oscillator for any frequency setting ideally upto 500 KHz or more till 2 MHz upon RC (R2 & C) time constant and by variable resistor (R2 Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 17.8051+ADC0804 Development Motherboard: Qty:1 8051 motherboard with all standard connections having all ports open ended with one of the port internally wired for using single channel ADC 0804 .Use female to female jumper wires for interfacing to peripherals. Requires 5 volt Dc 18.Underground Cable Fault Detection Sensor: Qty:1 Equivalent to a 3 phase 4 wire (R,Y,B,Gnd) underground cable made on a PCB with 12 fault creating switches (SLIDE SWITCHES) and indexed cable resistance ,on individual phases at every designated extrapolated kilometer to feed the output to an ADC to forms as an input to a microcontroller board for calculating the fault distance in KMs.It needs							

		additionally control circuit board using microcontroller, relay board, LCD display unit etc to complete the project in full. Needs 5v DC 19.WiFi Module using ESP8266 Qty:3 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 20.Keypad 4x3 Qty:1 12 push buttons wired in matrix format ideally suitable for interfacing to microcontroller or tone decoder IC 21.Zero Voltage Sensing Module: Qty:1 Needs pulsating DC of about 12v & 5V DC to develop 5 V narrow pulses at zero cross of waveform using dual OP AMP LM358. Having dual OP AMPs it can be used both for voltage and current as well (ZVS1,ZVS2). 22.4 Way Traffic Junction Module A 4 way traffic junction signal lighting system with red, green and amber LEDs in all four sides of a street junction terminated at connectors.Requires appropriate feed from any programmed microcontroller to complete a traffic junction project.Does not include microcontroller. 23.4 in 1- Segment Display Qty:1 4 parallel 7 segment common cathode display driven from any 8 pin port at J1 with 4 segment selection control input at J2. 24.555 in Monostable Mode Qty:1							

		In this 555 Timer is used in monostable mode ie one shot pulse based upon RC (R & C) time constant and by variable resistor (RV Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 25.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 26.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Bluetooth,TV Remote, Adapter, Stereo Mobile Pin,.Connector DB9 Straight Cord, AA cell case, Lamp Holder, Bluetooth Module, GSM Module, 2.4 RF Module, Temperature Sensor, Etc **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations							

		g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. **Innovation Kit Shell Qty:1** (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
40	**Power Electronics DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 201**	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need.	1	Education Pack (11 kits with 201 Innovations)	489955	489955	18%	88192	578147

	Innovations. Power Electronics-Core Electrical/Automatic PF Control/SV PWM, ACPWM: a)Microcontroller/Arduino based AC PWM control for induction motor by power MOSFET/IGBT b)Microcontroller/Arduino based AC PWM control using 2 anti series MOSFET/IGBT for induction motor c)Galvanically isolated zero voltage triggered through opto isolators and Direct mains utility fed to dual SCR bridge in anti parallel for applications in Cycloconverter / Dual Converter / Four Quadrant operation of motors and many more ac / dc load. d)Microcontroller/Arduino based SVPWM (Space Vector Pulse	f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation							

	Width Modulation)/ Sine Pulse Width Modulation (SPWM) /Bi Directional Rotation of Single Phase Induction Motor without Run Capacitor by Inverter kit of 3 Phase Power with 6 MOSFET/IGBTs in Bridge with Galvanic Isolation & Snubber e)Lamp Life Extender by ZVS (zero Voltage Switching) with or Without programmed Controllers/Arduino by ZVS/Non-ZVS triggered opto isolator feeding SCR/TRIAC f)Three Phase Solid State Relay with ZVS with programmed Controllers/Arduino by ZVS triggered opto isolator feeding SCR/TRIAC g)Microcontroller/Arduino monitored acceptable mains voltage window and with variable frequency features to detect power	b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:** Breakout Boards 1.Arduino Nano Development: Motherboard: Qty:18 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:17 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:16 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually.							

	grid Synchronisation failure on Sensing Frequency or Voltage Beyond Acceptable Range to develop output Islanding with several combinations of SCR/TRIAC/Relay/ IoT over the cloud and besides watching the parameters on built in mini DSO h)Microcontroller/Arduino based Voltage current sensed UPFC Related Display of Lag and Lead Power Factor ZVS triggered opto isolator feeding SCR/TRIAC/Relay using communication link GSM network and IoT over the cloud besides watching the parameters on built in mini DSO i)Microcontroller/Arduino based Voltage current sensed Power Saver for Industries and Commercial Establishments by automatic power factor	Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.MAX232 Board +DB9 Male Qty:4 Equipped with MAX232 IC ,and DB9 male, Serial communication from RFID, GSM, GPS etc to microcontroller through (Rx,Tx) can be established . Needs 5V DC and straight serial cord (DB9) for interface. 5.MAX232 Board+DB9 Female Qty:2 Equipped with MAX232 IC ,and DB9 male, Serial communication from microcontroller (Rx,Tx) to PC / Laptop can be established . Needs 5V DC and straight serial cord (DB9) for interface. 6. 5 Load Relay Driver Module Qty:15 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources 7.DTMF Encoder with Binary Output Qty:2 Module accepts input DTMF (Dual Tone Multi Frequency) tones for 8870 buffered by 7404 to develop 4 bit binary data (D0 to D3) for any microcontroller program to recognise the tones digitally for further action 8.433 MHz RF+HT12E Encoder Qty:4 Complete RF transmitter module with encoder (HT12) to take 8 bit hardware selected adjustable address data and 4 bit soft data(D0 to D3) from any microcontroller to develop serial data							

	correction ZVS triggered opto isolator feeding SCR/TRIAC/Relay using communication link GSM network and IoT over the cloud besides watching the parameters on built in mini DSO j)ZVS managed Integral cycle control by Cycle Stealing means using programed microcontroller/Arduino through opto isolated triggered SCR/TRIAC and communicating over GSM/RF/Bluetooth/DTMF/TV Remote/PC/Push Button for operating loads like incandscent lamp/Induction Motor besides watching the parameters on built in mini DSO k)Voltage Multiplier Circuit to generate High Voltage DC From AC by Using Diode and Capacitors up to 2KV	O/P for the RF transmitter to transmit over a distance of 50 meters. 9.433 MHz RF+HT12D Decoder Qty:4 Complete receiver module with decoder to develop 4 bit soft data(D0 to D3) based on 8 bit matching hardware adjusted address data for any microcontroller while receiving corresponding serial data at DATA from the RF transmitter within 50 meters from the transmitter. 10.TSOP Module Qty:2 38 KHz modulated IR signal receiving sensor to develop logical output at O/p while faced with an obstacle ahead.Has also wide applications in IR remote signal sensing. Needs 5 V DC 11.ZVS Optocoupler+Four Back to Back SCR Qty:15 Four independent back to back connected SCR pair with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated optocoupler.It is used for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 12.ZVS Optocoupler + Four TRIACS Qty:15 Four independent triac with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated ZVS optocoupler.Suitable for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 13.LCD Module for 4 Bit Input Module: Qty:11 16 character 2 line LCD display with adjustable intensity							

	or by Marx Generator Principles using 4-Stage Power MOSFET-Capcitor Circuit with 555 Timer and optocouplers without Microcontroller	provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC 14.Buzzer Amplifier Module Qty:3 Very little / tini input signal at I/p amplified by a transistor (BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing 15.IR Photodiode Pair Reflecting Module: Qty:6 IR diode (IR LED) & and photodiode (PHOTODIODE) placed side by side to receive reflected light while it faces any object ahead. Received light on the Photodiode is amplified by a transistor to develop logical output (O/p) with precise setting by a variable resistor 10K Preset.Requires 5 v Dc. Applications in RPM counting,and robotic sensing arrangement 16. 555 Module in Astable Mode: Qty:2 Free running oscillator for any frequency setting ideally upto 500 KHz or more till 2 MHz upon RC (R2 & C) time constant and by variable resistor (R2 Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 17.8051+ADC0804 Development Motherboard: Qty:1 8051 motherboard with all standard connections having all ports open ended with one of the port internally wired for using single channel ADC 0804 .Use female to female jumper wires for interfacing to peripherals. Requires 5 volt Dc 18.Underground Cable Fault Detection Sensor: Qty:1 Equivalent to a 3 phase 4 wire (R,Y,B,Gnd) underground cable							

		made on a PCB with 12 fault creating switches (SLIDE SWITCHES) and indexed cable resistance ,on individual phases at every designated extrapolated kilometer to feed the output to an ADC to forms as an input to a microcontroller board for calculating the fault distance in KMs.It needs additionally control circuit board using microcontroller, relay board, LCD display unit etc to complete the project in full. Needs 5v DC 19.WiFi Module using ESP8266 Qty:3 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 20.Keypad 4x3 Qty:1 12 push buttons wired in matrix format ideally suitable for interfacing to microcontroller or tone decoder IC 21.Zero Voltage Sensing Module: Qty:1 Needs pulsating DC of about 12v & 5V DC to develop 5 V narrow pulses at zero cross of waveform using dual OP AMP LM358. Having dual OP AMPs it can be used both for voltage and current as well (ZVS1,ZVS2). 22.4 Way Traffic Junction Module A 4 way traffic junction signal lighting system with red, green and amber LEDs in all four sides of a street junction terminated at connectors.Requires appropriate feed from any programmed microcontroller to complete a traffic junction project.Does not include microcontroller.							

		23.4 in 1- Segment Display Qty:1 4 parallel 7 segment common cathode display driven from any 8 pin port at J1 with 4 segment selection control input at J2. 24.555 in Monostable Mode Qty:1 In this 555 Timer is used in monostable mode ie one shot pulse based upon RC (R & C) time constant and by variable resistor (RV Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 25.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 26.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Bluetooth,TV Remote, Adapter, Stereo Mobile Pin,.Connector DB9 Straight Cord, AA cell case, Lamp Holder, Bluetooth Module, GSM Module, 2.4 RF Module, Temperature Sensor, Etc **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract							

		c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. **Innovation Kit Shell Qty:1** (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
41	**Renewable energy based DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard**	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication	1	Education Pack (5 kits with 41 Innovations)	205262	205262	18%	36947	242209

	And Soft Copy Product And Innovation Manuals as per specification Enabling 41 Innovations. Smart Cities-Solar a)LDR Sensor digital output fed to programmed microcontroller/Arduino or without microcontroller using solar or conventional power for auto turn on/off street lights from dusk to dawn b)Auto LED street light intensity Control by programmed microcontroller/Arduino or without microcontroller using solar or conventional power c)Microcontroller/Arduino based Street Light That Glows on Detecting Vehicle Movement along with Day Off Night on/	LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard							

	Programmable Decoration Light d)Half H-bridge Inverter using MOSFET/IGBT for Wireless power transfer by High frequency resonating coils /Solar Invertor 100VA ,50Hz using high voltage, high speed power MOSFET/IGBT drivers e)Microcontroller/Arduino based Beacon Flasher /Industrial Drafting Fan in Stepped Speed Control using BLDC Motor /Ambulance Light/ Discotheque Light Stroboscopic Flasher / Automobile Head Light Lamp Intensity Dimmer to Control Glare	components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:** Breakout Boards 1.Arduino Nano Development: Motherboard: Qty:4 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.12V AC to DC Power Supply 5V: Qty:4 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required.							

		3.8051+Push Button Development Motherboard: Qty:4 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.96 White LED Array-12V Qty:3 Cluster of 96 bright white LEDs in series parallel combination having provision for input signal (I/p) to be driven by a built-in MOSFET from 12V DC source upon signal / PWM signal from any microcontroller. Requires 12v DC 5.48 White LED Array-6V Qty:2 Cluster of 48 bright white LEDs in series parallel combination having provision for input signal (I/p) to be driven by a built in MOSFET from 6 V DC source upon signal / PWM signal from any microcontroller. Requires 6v DC 6.Solar Charge Controller 6V Qty:3 Board has adjustable protection for sensing under voltage, overcharging, deep discharge & overload provision (4 PRESETS) against presetable parameters fed to a quad OP AMP LM324 for 10 watt solar photovoltaic panel (SOLAR PANEL) and a rechargeable battery. Solar panel & battery not included. 7.WiFi Module using ESP8266 and IOT-Cloud Qty:1 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but							

		specific loads operated through cloud . 8.LDR Sensor Module with Logic Output: Qty:1 Changing light intensity sensed by LDR(Light Dependant Resistor) and then amplified by a transistor to develop logic output (O/p) with precise adjustment by variable resistor 10K Preset. Requires 5V DC 9.Street light with Sensors Qty:1 This board has 8 nos of IR-Photodiode sensor pair facing each other through an IR beam falling on the photodiode to deliver logic output for each while IR beam is interrupted. It also has 14 White LEDs to be driven directly from microcontroller ports.Need 5V DC 10.SG3524 dual complementary PWM Generator Qty:1 SG3524 PWM Generator IC is used in this board, Select R & C values for required frequency output. The feedback is also provided to control the output voltage. Required Minimum +12V DC to operate. 11.IR2101+Half H-Bridge Inverter Qty:1 Two MOSFET and Two capacitors are making Half Bridge with MOSFET driver IC IR2101. 12.18v AC to DC Power Supply 15V Qty:1 Needs 18v input ac to deliver unfiltered DC ,unregulated 18 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 15 volt DC through heat sink mounted LM7815 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required							

		Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Female Reliments, Mini Oscilloscope Module, Solar Panel, Inverter Transformer, Lamp, Lamp Holder, Battery 12V, 6V, Etc **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. **Innovation Kit Shell Qty:1** (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with**							

		the product.							

Annexure- 10.6 c

S.No.	Item Name with Brief Specification	Detailed Specification	Quantity	Type	Estimated Cost/Unit in Rs.	Total Estimated in Rs. (A)	Sales tax and other taxes payable		Final Price (Rs.)
							In %	In figures (B)	(A+B)
1	DIY STEM Tinkering Kit Robotics Design And Prototyping - Build Multiple Real Time Robots And Remotes, In A One Of Its Kind Arrangement Using Reusable Modules Including Basic Components, Inputs, Outputs, Wires, Connectors, Electrical And Mechanical Accessories And Breadboard With Detailed Project Manual And Audio-visuals.	**Hardware Technical Specifications:** a. Material: Double sided PTH glass epoxy PCB for each module. b. Each discrete component duly mounted on micro PCBs forming a functional module, with breadboard compatible male pins for easy reuse with desired items such as resistors, capacitors, switches, transistors to play around basic circuits etc. c. Each category of modules to have different color for easy identification such as input modules, output modules, accessories etc. d. Power supply module to accept 5V DC from any charger of smart cell phone. e. Breadboard: One 840 points type breadboard having 2 horizontal set of lines both at top and bottom for feeding power. Also having 64 in (5x2) section vertical lines for developing any electronic circuit to be wired together with jumper wires and the building blocks. f. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. **List of Material:(x10 Sets)** 1. Transmitter Unit Module 1 No's	1	Education Pack (10 Kits)	59990	59990	18%	10798	70788

		2. Receiver Unit Module 1 No's 3. Diode Module 2 No's 4. L Clamps Module 2 No's 5. Wheels Module 2 No's 6. Geared Motor:(6V, 60rpm) Module 2 No's 7. Screw and Nuts Module 6 No's 8. Matching Jumper 8 No's 9. Jumper Wires "As per Requirement" 10. Connector Module 5 No's 11. Push Button Switch Module 4 No's 12. Slide Switch Module 4 No's 13. Reed Sensor Module 4 No's 14. Touch Point Module 4 No's 15. BC 547 NPN Transistor Module 8 No's 16. Breadboard 1 No's 17. Project Guide Book 1 No's **Project Guide Specification:** a. Detailed documentation booklet covering all modules offered b. Circuit Diagram: Complete circuit diagram suggested for beginners with its full explanations of the modules used. c. Fritzing Diagram: Detailed Fritzing diagram with rows and columns duly numbered for mounting each module on the breadboard. d. Physical Image: Exact physical image of the breadboard containing the building blocks and jumper wire as per the circuit. e. Function: Each module to have explanations on its function in relation to the circuit diagram. f. Self explained program codes wherever applicable g. Assembly and Troubleshooting document h. Possible Activities and experiments details i. Audio Visual explanation on clearly understanding the							

		breadboard, assembly and its use and explaining different concepts. (Refer Annexure 2 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
2	Basic DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 26 Innovations.	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j.	1	Education Pack (10 Kits - 26 Innovations)	384430	384430	18%	69197	453627

		capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:(x10 Sets)** **Breakout Boards**							

		1.Arduino Nano Development: Motherboard: Qty:1 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:1 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:1 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.96 White LED Array-12V Cluster of 96 bright white LEDs in series parallel combination having provision for input signal (I/p) to be driven by a built-in MOSFET from 12V DC source upon signal / PWM signal from any microcontroller. Requires 12v DC 5.Buzzer Amplifier Module Very little / tini input signal at I/p amplified by a transistor							

		(BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing 6.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 7.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 8.Flame Sensor Qty:1 Signal from a Flame sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 9.LDR Sensor Module with Logic Output: Changing light intensity sensed by LDR(Light Dependant Resistor) and then amplified by a transistor to develop logic output (O/p) with precise adjustment by variable resistor 10K Preset. Requires 5V DC 10.LCD Module for 4 Bit Input Module: Qty:1 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC							

		Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Female Reliments, **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. Innovation Kit Shell Qty:1 (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
3	Advanced DIY Innovation	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable	1	Education Pack (10	592220	592220	18%	106600	698820

	Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 48 Innovations.	stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-		Kits - 48 Innovations)					

		mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:(x10 Sets)** **Breakout Boards** 1.Arduino Nano Development: Motherboard: Qty:1 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board.							

		2.AC to DC Power Supply 5V: Qty:1 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:1 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.WiFi Module using ESP8266 Qty:1 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 5. 5 Load Relay Driver Module Qty:1 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources 6.IR Photodiode Interrupting Module Qty:1 IR diode (IR LED)and photodiode (PHOTODIODE) face each							

		other. Photodiode receives beamed light light from IR. While it encounters any object interrupting the beam the Photodiode develops a signal which is amplified by a transistor to develop logical output based on adjustable limits by 10K PRESET .Requires 5v DC. Applications in visitor counting and robotic sensing arrangement using microcontroller board and other necessary peripherals. 7.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 8.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 9.Flame Sensor Qty:1 Signal from a Flame sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 10.LDR Sensor Module with Logic Output: Changing light intensity sensed by LDR(Light Dependant Resistor) and then amplified by a transistor to develop logic output (O/p) with precise adjustment by variable resistor 10K Preset. Requires 5V DC 11.LCD Module for 4 Bit Input Module: Qty:1 16 character 2 line LCD display with adjustable intensity							

		provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Female Reliments, Lamp, Lamp Holder **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. Innovation Kit Shell Qty:1 (Refer Annexure 1 for list of Innovations.)							

		Relevant Software and Firmware to be supplied along with the product.							
4	DIY Solderable and Trainer Kit For War Field Spying Robot With Night Vision Wireless Camera With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy. b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Transmitter 1. Resistor 330R 1 No's 2. Resistor 10K 12 No's 3. Resistor 100K 1 No's 4. Resistor 1M 1 No's 5 Capacitor 10uF/63V 2 No's 6. Capacitor 33pF Ceramic 2 No's 7. IC AT89C2051 1 No's 8. IC HT12E 1 No's 9. IC Base 20 Pin 1 No's 10. IC Base 18 Pin 1 No's 11. Diode 1N4007 1 No's 12. 4 PIN FEMALE BURGE 4 No's 13. 2 PIN PUSH BUTTONS 8 No's 14. CRYSTAL 11.0592Mhz 1 No's	1	(1 Trainer) + (5 Solderable) DIY kits	167070	167070	18%	30073	197143

		15. 4 PIN RF TRANSMITTER MODULE 1 No's 16. FEMALE RELEMENT 2 PIN ONE SIDE 1 No's 17. MALE RELIMET 2 PIN 1 No's 18. LED-RED 1 No's 19. SLIDE SWITCH (ON/OFF) 1 No's 20. PLAIN PCB 1 No's 21. SCREW DRIVER 1 No's 22. SOLDERING LED (50 gm) 1 No's 23. CONNECTING WIRE FOR JUMPER 1 No's 24. CELL COVER 1 No's 25. 1.5V CELL 4 No's Receiver 26. Resistor 10K 5 No's 27. Resistor 330R 1 No's 28. Resistor 68K 1 No's 29. Resistor 10R/10W 1 No's 30. Capacitor 33pF Ceramic 2 No's 31. Capacitor 10uF /63V 2 No's 32. Capacitor 100uF/35v 1 No's 33. Capacitor 1000uF /35V 1 No's 34. IC 7805 1 No's 35. IC 7809 1 No's 36. IC AT89S52 1 No's 37. IC L293D 1 No's 38. IC HT12D 1 No's 39. IC BASe 40 Pin 1 No's 40. IC Base 16 Pin 1 No's 41 IC Base 18 Pin 1 No's 42. Diode 1N4007 1 No's 43. BATTERY 12V (6V X 2) 1 1 No's 44. 4 PIN FEMALE BURGE 2 2 No's 45. 2 PIN PUSH BUTTON 1 1 No's							

		46. CRYSTAL 11.0592Mhz 1 1 No's 47. 8 PIN RF RECEIVER MODULE 1 1 No's 48. 2 PIN MALE BURGE 2 1 No's 49. 2 PIN FEMALE BURGE 2 2 No's 50. 2 PIN MALE RELIMET 2 2 No's 51. 2 PIN FEMALE RELIMET ONE SIDE 2 2 No's 52. LED-RED 1 1 No's 53. HEAT SINK FOR 7805 1 1 No's 54. SCREW NUT FOR HEAT-SINK 1 1 No's 55. IR LED'S 24 24 No's 56. ROBOT BODY KIT (I**NCLUDING DC MOTORS) 1** 1 No's 57. WIRELESS CAMERA 1 1 No's 58. WIRELESS CAMERA RECEIVER KIT 1 1 No's 59. **13 HOLE** ANGLE 1 1 No's 60. Z CLAMPS 2 2 No's 61. SPANNER 20/22 1 1 No's 62. SPST SWITCH (ON/OFF) 1 1 No's 63. SCREW NUTS SET 1 1 No's 64. 17 HOLE FLAT PATTI (FOR BATTRY CLAMP) 1 1 No's 65. RIBBON WIRE FOR ZEROBOARD 1 **N**o's 66. PLASTIC SPACCERS 4 4 No**'s** **67.** LONG SCREW NUT SET 1 1 No's 68. 104PF 2 2 No's 69. PLAIN PCB 1 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explana**tions**							

		g. Soldering and Assembly procedure h. Troubleshooting document i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
5	DIY Solderable and Trainer Kit For Pick N Place Robotic Arm And Movement Controlled By Android Wirelessly With Complete Product	**Hardware Technical Specifications:** a. Printed Circuit Board material should be glass epoxy. b. High quality through hole components to be supplied. c. Open Gerber files of all PCB supplied to be provided. d. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the	1	(1 Trainer) + (5 Solderable) DIY kits	149935	149935	18%	26988	176923

	Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.	power devices & heat sink wherever necessary. e. All signal paths need to have galvanic isolation by use of proper Opto-isolator. f. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** 1. Resistor 22R 1 No's 2. Resistor 330R 1 No's 3. Resistor 10K 5 No's 4. Resistor 100R 4 No's 5. Resistor 1K 2 No's 6. Resistor 10R/2W 2 No's 7. Preset 5K 4 No's 8. Resistor 10K SIP 1 No's 9. Capacitor 1000uF/35V 3 No's 10. Capacitor 100uF/25V 2 No's 11. Capacitor 10uF/63V 2 No's 12. Capacitor 33pF Ceramic 2 No's 13. 7805 Voltage Regulator 1 No's 14. AT89S52 1 No's 15. L293D IC 2 No's 16. MCT2E IC 4 No's 17. 40-PIN IC BASE 1 No's 18. 16-PIN IC BASE 2 No's 19. 06-PIN IC BASE 4 No's 20. Diode 1N4007 9 No's 21. Diode 3.3V ZENER 1 No's 22. Transistor BC557 2 No's 23. BLUETOOTH DEVICE 1 No's 24. BATTERY 12V (6V X 2) 1 No's							

		25. CRYSTAL11.0592MHz 1 No's 26. LED-RED 1 No's 27. 2-PIN PUSH BUTTON 1 No's 28. MALE BURGE 2-PIN 4 No's 29. FEMALE BURGE2-PIN 4 No's 30. MALE RELIMET2-PIN 1 No's 31. FEMALE RELIMET2-PIN ONE SIDE 1 No's 32. FEMALE BURGE6-PIN 1 No's 33. MALE BURGE6-PIN(INCLUDED IN BLUETOOTH DEVICE) 1 No's 34. FEMALE BURGE17-PIN 2 No's 35. MALE BURGE17-PIN (INCLUDED IN BLUETOOTH DEVICE) 2 No's 36. ROBO SPARE PARTS SET (INCLUDING 4 12V DC MOTORS) 1 No's 37. HEAT SINK FOR 7805 1 No's 38. SCREW NUT FOR HEAT SINK 1 No's 39. SPANNER 20/22 1 No's 40. 17 HOLE FLAT 1 No's 41. SPST SWITCH (ON/OFF) 1 No's 42. Z-CLAMP 2 No's 43. SCREW NUTS SET 1 No's 44. BATTERY CLAMP (FIXING BATTERIES) 1 No's 104PF 4 No's 45. 5 HOLE PLAIN PATH 1 No's 46. PLAIN PCB 1 No's 47. SCREWDRIVER 1 No's 48. SOLDERING LED (50 gm) 1 No's 49.CONNECTING WIRE 1 No's **Innovation Manual Specification:** a. Problem Definition b. Project Abstract							

		c. Circuit diagram of the project with full explanation d. Layout diagram of the project e. Self explained program codes f. Physical image together with functional explanations g. Soldering and Assembly procedure h. Troubleshooting document i. Operational Procedure for Trainer Kit j. FAQ: Frequently asked questions to be provided k. Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. l. Detailed datasheet of every item to be provided with their application areas m. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. 2. Soldering Iron Qty:1 3. Digital Multimeter Qty:1 4. Component Cutter Qty:1 Trainer Kit Shell Qty:1 **Relevant Software and Firmware to be supplied along with the product.**							
6	DIY Solderable and Trainer Kit For Line	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy.	1	(1 Trainer) + (5	36408	36408	18%	6553	42961

	Following Robotic Vehicle With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 470R, Resistor 10K, Capacitor 10uF, Diode 1N4007, Transistor TIP122, IR LEDS, PHOTO DIODES, RED LED, MALE RELEMENT 2 PIN, FEMALE RELEMENT 2 PIN ONE SIDE, PLAIN PCB, CONNECTING WIRE, ROBOT BODY (SAGE BOARD), CHASSIS INCLUDING 2MOTORS), CELL CASE, 1.5V CELLS*4, 104PF, SPST SWITCH (ON/OFF), CASTOR BALL, SCREW NUTS **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally		Solderable) DIY kits					

		building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
7	DIY Solderable and Trainer Kit For Auto Metro Train to Shuttle between Stations With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification. This Kit focuses on SDG:11 Sustainable Cities and Communities	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 150R, Resistor 330R, Resistor 1K, Resistor 2.2K, Resistor 10K, Preset 10K, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, Capacitor 0.1uF Ceramic, 7805 Voltage Regulator, AT89S52, L293D IC, 16 Pin Base, 40 Pin Base, Diode 1N4007, Transistor BC547, LED-Red, LED-Green, IR LED, Photo Diode, 7-Segment Common Anode, Crystal 11.0592MHz, Heat Sink, Screw Nut For Heat Sink, Male Header 2-Pin, Male Reliment 2-Pin, Female Reliment 2-Pin One Side, 2 Pin Push Button, Buzzer, Male Reliment 5-Pin, Female Reliment One Side 5-Pin, CD Door Motor, Battery 12V (6V X 2) , Robo Spare Parts SET (Including 2 12V DC	1	(1 Trainer) + (5 Solderable) DIY kits	88887	88887	18%	16000	104887

		Motors). Spanner 20/22, SPST Switch (ON/OFF), Screw Nuts, Battery CLamp (FIXING BATTERIES), Dedicated PCB **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
8	DIY Solderable and Trainer Kit For Voice Controlled Robot By Cell Phone With Android App With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components.	1	(1 Trainer) + (5 Solderable) DIY kits	55686	55686	18%	10023	65709

	Industry, Innovation and Infrastructure	**List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 22R, Resistor 330R, Resistor 10K, Capacitor 10uF/63V, Capacitor 33pF Ceramic, AT89S52, L293D IC, 40-PIN IC BASE, 16-PIN IC BASE, Diode 1N4007, Diode 3.3V ZENER, BLUETOOTH DEVICE, CELL CASE, PENCIL CELL BATTERY (4 X 1.5V) , 2-PIN FEMALE RELEMENT ONE SIDE, CRYSTAL11.0592MHz, LED-RED, 4-PIN PUSH BUTTON, MALE BURGE 2-PIN, MALE RELEMENT 2-PIN, FEMALE BURGE 6-PIN, MALE BURGE 6-PIN (INCLUDED IN BLUETTOH DEVICE), FEMALE BURGE 17-PIN, MALE BURGE 17-PIN(INCLUDED IN BLUETTOH DEVICE), SAGE BODY (INCLUDING DC MOTORS), PLAIN PCB, SOLDERING LED (50 gm), CONNECTING WIRE, ASSEMBLY PROCEDURE MANUAL, SCREW NUT SET, SPST SWITCH (ON/OFF), CASTOR BALL, 104 pf,Z-Clamps **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype.							

		Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
9	DIY Solderable and Trainer Kit For Metal Detector Robotic Vehicle With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Transmitter Resistor 330R, Resistor 10K, Resistor 100K, Resistor 1M, Capacitor 10uF/63V, Capacitor 33pF Ceramic, AT89C2051, HT12E IC, 20-Pin Base, 18-Pin Base, Diode 1N4007, Crystal 11.0592MHz, LED-Red, 2-Pin Push Buttons, RF Transmitter Module (4-Pin), Female Header 4-Pin, Male Reliment 2-Pin, Female Reliment 2-Pin One Side, Antenna, Slide Switch, Dedicated PCB, Connecting Wire, 1.5V Cell, 4 Cell Cover, Receiver Resistor 330R, Resistor 10K, Resistor 68K, Capacitor 1000uF/35V, Capacitor 10uF/63V, Capacitor 33pF Ceramic, AT89S52, HT12D IC, L293D IC,	1	(1 Trainer) + (5 Solderable) DIY kits	72822	72822	18%	13108	85930

		40-Pin Base, 18-Pin Base, 16-Pin Base, Diode 1N4007, Cell Cover, 9V Battery (Metal Detector), Battery Clip For 9V Battery, Pencil Cell Battery (4 X 1.5V), 2-Pin Female Relement One Side, Crystal 11.0592MHz, LED-Red, 2-Pin Push Button, RF Receiver Module (8-Pin), Male Header 2-Pin, Male Reliment 2-Pin, Female Header 2-Pin, Female Reliment 2-Pin One Side, Dedicated PCB Metal Detector Circuit Resistor 56K, Resistor 3.3K, Resistor 22K, Resistor 2.7K, Resistor 2.2K, Resistor 680R, Resistor 15K, Preset 5K, Capacitor 0.1uF (104) Ceramic, Capacitor 0.001uF (102) Ceramic, Capacitor 220pF Ceramic, Capacitor 270pF, Capacitor 10Uf/63V, Capacitor 100uF/25V, Transistor BC547, Diode 1N4148, LED-Red, Metal Detector Coil (30 TURNS OF 26 SWG DIA 5CM), Male Header 2Pin, Female Header, Buzzer, Screw Nut For Heat-Sink, SAGE Body (Including DC Motors), Screw Nut SET, Assembly Procedure Manual, Plastic Strip For Detector Coil, Z-Clamps, SPST Switch (ON/OFF), Castor Ball **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype.							

		Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
10	DIY Solderable and Trainer Kit For Cell Phone Controlled Robotic Vehicle With Complete Product Manual Hard And Soft Copy (1 Trainer + 5 DIY kits) as per specification.This Kit is focuses on SDG: 9 Industry, Innovation and Infrastructure	**Hardware Technical Specifications:** Printed Circuit Board material should be glass epoxy. High quality through hole components to be supplied. Open Gerber files of all PCB supplied to be provided. PE projects: All PE DIY kits using power semiconductor devices should have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal paths need to have galvanic isolation by use of proper Opto-isolator. Gates of all power devices need to have adequate protection with required components. **List of Material (6 Sets):** **(Solderable Commonents 5 set and Trainer Kit Soldered components 1 set)** Resistor 330R 1 No's Resistor 10K 5 No's Resistor 330K 1 No's Resistor 100K 1 No's Resistor 22K 1 No's Capacitor 470uF/35V 1 No's Capacitor 10uF/63V 2 No's Capacitor 33pF Ceramic 2 No's Capacitor 0.1uF (104) Ceramic 2 No's Capacitor 0.47uF (470nF) Polyester 1 No's Capacitor 22pF Ceramic 2 No's AT89S52 1 No's	1	(1 Trainer) + (5 Solderable) DIY kits	48189	48189	18%	8674	56863

		L293D IC 1 No's MT8870/HT9170 IC 1 No's 7404 IC 1 No's 40-Pin Base 1 No's 18-Pin Base 1 No's 16-Pin Base 1 No's 14-Pin Base 1 No's Diode 1N4007 1 No's Cell Cover 1 No's Pencil Cell Battery (4 X 1.5V=6V) 4 No's Crystal1 11.0592MHz 1 No's Crystal2 3.57MHz 1 No's 2 Pin Push Button 1 No's Male Header 2-Pin 3 No's Male Reliment 2-Pin 1 No's Female Reliment 2-Pin One Side 4 No's Mobile Phone Ear Phone Pin 1 No's LED Red 1 No's SAGE Body (Including 2 DC Motors) 1 No's Dedicated PCB 1 No's Screw Driver 1 No's Connecting Wire 1 No's Assembly Procedure Manual 1 No's Screw Nut SET 1 No's SPST Switch (ON/OFF) 1 No's Castor Ball 1 No's Z-CLamps 2 No's **Project Guide Technical Specification:** Problem Definition Project Abstract Circuit diagram of the project with full explanation Layout diagram of the project							

		Self explained program codes Physical image together with functional explanations Soldering and Assembly procedure Troubleshooting document FAQ: Frequently asked questions to be provided Thorough explanation from the Problem definition to Circuit Design to Programming, Testing, Troubleshooting and finally building a working hardware prototype. Detailed datasheet of every item to be provided with their application areas Output Video for real time functioning to be made available. **Relevant Software and Firmware to be supplied along with the product.**							
11	**Robotics DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 102 Innovations.** Robotics:	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only. d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board.	1	Education Pack (9 kits with 102 Innovations)	527699	527699	18%	94986	622685

	a)Microcontroller/Arduino based Stepper Motor Control for Robotic Applications by using communication links over RF/Bluetooth/DTMF/TV Remote/PC/Keypad/Push Button b)Microcontroller/Arduino based Fire Fighting Robotic Vehicle using communication links over RF/Bluetooth/DTMF/TV Remote c)Microcontroller/Arduino based Pick & Place Robot with Tension Controlled Soft Catching Arm using communication links over RF/Bluetooth/DTMF/TV Remote d)Microcontroller/Arduino based Remote Controlled Robotic Operation with Robotic Arm control using communication link RF/Bluetooth/DTMF/T	h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used							

	V Remote/PC/Voice and Auto Metro Train to Shuttle Between Stations e)IR sensor based Line Following / Wall Following / Obstacle Avoidance/ Accident Avoidance in Vehicle Robot using without and with Microcontroller/Arduino f)Microcontroller/Arduino based War Field Spying Robot with Night Vision Wireless Camera using communication links over RF/Bluetooth/DTMF/TV Remote g)Metal Detector & Metal Detector Robotic Vehicle using communication links over RF/Bluetooth/DTMF/TV Remote/PC by without and with Microntroller/Arduino h)Microcontroller/Arduino based Sun Tracking	d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:** Breakout Boards 1.Arduino Nano Development: Motherboard: Qty:2 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:1 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:2 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.Motor Driver using L293D Qty:1							

	Solar Panel with or without RTC(Real Time Clock)/Stepper Motor Control using Ldr using ULN2003 IC i)Arduino/Microcontroller based Smoke and Lpg Gas Detection/Smart Floor Cleaner Robot using communication link RF and IoT over the cloud.	Low power 12v / 6v Dc Motor driver using L293D for 2 motors (not included) each section having all open ended logical input and output pins (IP1 to IP4) with noise suppression capacitors at the output. It also has a provision for sensing limits of a door motor to send signals to Interrupt pins (Int0,Int1) to a microcontroller for necessary action. Suitable for many robotics applications.Not suitable for stepper or servo motor. 5.DTMF Encoder with Binary Output Qty:1 Module accepts input DTMF (Dual Tone Multi Frequency) tones for 8870 buffered by 7404 to develop 4 bit binary data (D0 to D3) for any microcontroller program to recognise the tones digitally for further action 6.433 MHz RF+HT12E Encoder Qty:1 Complete RF transmitter module with encoder (HT12) to take 8 bit hardware selected adjustable address data and 4 bit soft data(D0 to D3) from any microcontroller to develop serial data O/P for the RF transmitter to transmit over a distance of 50 meters. 7.433 MHz RF+HT12D Decoder Qty:1 Complete receiver module with decoder to develop 4 bit soft data(D0 to D3) based on 8 bit matching hardware adjusted address data for any microcontroller while receiving corresponding serial data at DATA from the RF transmitter within 50 meters from the transmitter. 8.TSOP Module Qty:1 38 KHz modulated IR signal receiving sensor to develop logical output at O/p while faced with an obstacle ahead.Has also wide applications in IR remote signal sensing. Needs 5 V DC							

		9.LDR Sensor Module with Logic Output: Changing light intensity sensed by LDR(Light Dependant Resistor) and then amplified by a transistor to develop logic output (O/p) with precise adjustment by variable resistor 10K Preset. Requires 5V DC 10.LCD Module for 4 Bit Input Module: Qty:1 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC 11.WiFi Module using ESP8266 Qty:1 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 12. 5 Load Relay Driver Module Qty:1 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources 13.Keypad 4x3 Qty:1 12 push buttons wired in matrix format ideally suitable for interfacing to microcontroller or tone decoder IC							

		14.Robotics Multifunction Chassis Qty:1 A chassis made out od a PCB with a fixed caster and 2 nos wheel mounted 6 V (BO) geared motors being driven by on board motor driver IC. Has provisions of IR photodiode sensing suitable for line / wall following robotic vehicle. Needs 5 to 6 volts DC 15.DC Motor Overload Control Module Qty:1 12 volt DC motor with over current sensing during locked rotor condition to develop logical output with galvanically isolated optocoupler for 2 sets of motors.IP1 ,IP2, IP3, IP4, for input and interrupt signals for microcontroller Int0,Int1 for output are available. Does not include motors. Requires 12 volt and 5 volt DC. 16.Bi-polar Stepper Driver+ULN2003 Driver board with built in ULN2003 for driving small 5 volt bipolar stepper motor, 6 wire (1,2,3,4,5v,5v) accepting input at (Step 1 to 4 plus +ve and Gnd) from any microcontroller. Needs 5 volt logic high DC signal voltage from microcontroller. Needs 5 volt VCC.Does not include stepper motor nor microcontroller. 17.Buzzer Amplifier Module Very little / tini input signal at I/p amplified by a transistor (BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing 18.Metal Detector Module Metal detector developing logic low output signal on sensing any metal near a resonating coil.Also provided with a buzzer sound and precise adjustments by 5K PRESET.Needs 9 volts							

		DC 19.MAX232 Board+DB9 Female Equipped with MAX232 IC ,and DB9 male, Serial communication from microcontroller (Rx,Tx) to PC / Laptop can be established . Needs 5V DC and straight serial cord (DB9) for interface. 20.DS1307 RTC (Real Time Clock) This IC transfers address and data bits serially through I2C, Bidirectional bus. It also has provision for battery (not included) backup during power failure.Needs 5V DC, 21.Gas Sensor Digital and Analog Signal from a gas sensor is compared against a preset value to develop a logic output at the signal points. Easily cascadable to several different units by 3 line bus 22.IR Reflecting Sensor Infrared diode and photodiode placed side by side receives reflected IR light from any object ahead of it compared against a preset value to develop a logic output at the signal points. Easily cascadable to several different units by 3 line bus Accessories and Peripherals like USB Cord, Heat Sink, Bluetooth, Stereo Mobile Pin, AA cell case, , Big Robot Body Set, DC Motor 12V Geared, Bluetooth Module, Transformer, Stepper Motor, Solar Panel **Innovation Manual Specification:** Each guided innovation has detailed documentation complete with: a. Problem Definition							

		b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. **Innovation Kit Shell Qty:1** (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							
12	**Industrial Application and Control DIY Innovation Development Kit Enabling Multiple Guided And Open Innovations Using Reusable Breakout Boards, Peripherals**	**Hardware Technical Specifications:** a. Breakout Boards need to be Modular, open ended, reusable stand alone boards with a set of connectors for interconnecting them with jumper wires to many other boards including motherboards like microcontroller and Arduino b. Material: Double sided PTH glass epoxy PCB. c. Connectivity: Multiple number of header/ relement pins for input, output & power supply. All mains voltage terminals to be screw connector only.	1	Education Pack (10 kits with 129 Innovations)	549446	549446	18%	98900	648346

	And Accessories. The Kit Includes Hard And Soft Copy Product And Innovation Manuals as per specification Enabling 129 Innovations. Industrial Application- DC Motor/ DC Motor based Four Quadrant/ PWM/ Garage Door Opening/ Surveillance/ Dish Positioning a)Microcontroller/Arduino based PWM controlled speed control of DC Motor over communication links in GSM/RF/Bluetooth/DTMF/PC/TV Remote/Push Button besides watching the parameters on built in mini DSO b)Microcontroller/Arduino based Four Quadrant of DC Motor using communication links over	d. Power Indication: Every board to have power on indication LED to ensure DC power availability while connected properly. e. Components: Breakout boards to be mounted with high quality throughhole type wherever available with exact value printed on PCB to facilitate easy replacement in case of need. f. No component is on the back side of PCB excepting robotic chassis. g. Mounting: Every board to have desired number of mounting holes for ease of fixing on a base board. h. Sensor Boards: All sensor boards to maintain uniform male and female pin connectivity arrangement on a 3 line bus concept ie '+ve', '-ve' in sides and output/input at the center for connecting any number of boards in cascaded manner. i. Beginners boards: Each discrete component to be available duly mounted on micro PCBs with breadboard compatible male pins for easy reuse with desired items such as resistors, j. capacitors, switches, transistors to play around basic circuits etc. k. Power Electronics Boards: All PE boards using power semiconductor devices to have appropriate inbuilt snubber, across the power devices & heat sink wherever necessary. All signal path to have galvanic isolation by use of proper opto-isolator. Gates of all power devices have adequate protection with required components. l. Robotics Boards: The robotic board to have all the electro-mechanical items like motors and clamps to be mounted on the same PCB accommodating the control electronics preferably in SMD. m. IOT boards: All boards required for IOT applications to have provision for network connectivity arrangement to Wi-Fi, RF, RS232 and sensors. n. Controller Board: Each type of controller board to have all of							

	RF/Bluetooth/DTMF/TV Remote/PC/Voice/Push Button c)Microcontroller/Arduino based Automatic Surveillance Camera Panning System using communication links RF/Bluetooth/DTMF/TV Remote/PC d)Microcontroller/Arduino based Dish Positioning control using Communication links over RF/Bluetooth/DTMF/TV Remote/PC e)Microcontroller/Arduino based Garage Door Opening System using communication links over GSM/RF/Bluetooth/DTMF/TV Remote f)Arduino/Microcontroller based Movement Sensed Burglar Alarm & Door opening System through DC Motor Using PIR Sensor g)Arduino/Microcontroller based Smart	their I/O port pins in open ended form together with standard components for independent use. **Product Manual Specification:** a. Complete circuit schematic of breakout board and its full explanation b. Layout diagram with pin details for each breakout board for easily locating physical components on the board provided c. Exact physical image of the breakout board to identify the components used d. Each breakout board to have explanations on its function in relation to the circuit diagram. e. Detailed datasheet of every item to be provided with their application areas **List of Material:** Breakout Boards 1.Arduino Nano Development: Motherboard: Qty:18 Open ended board with male headers for all ports.On board provision of 8 push button switches (SW) with duly pulled up resistors internally wired to specific port for imposing external logic level input.Use female to female jumper wires for interfacing to peripherals. Requires 5V DC and sketch loading for I/O ports to work as desired along with Arduino Nano mounted on board. 2.AC to DC Power Supply 5V: Qty:17 Needs 12v input ac to deliver unfiltered DC ,unregulated 12 volt DC(Ur DC) by on board bridge regulator and filtering capacitors and regulated 5volt DC through heat sink mounted LM7805 regulator the output of which terminated at specified connectors (P dc)for maximum of about 300mA. Unfiltered DC being pulsating DC ,available, can be used for waveform							

	Surveillance using PIR Sensor/ Trespasser Identification/Vehicle Safety System with Alcohol Detector using communication link GSM network h)Arduino/Microcontroller based Railway Gate Control using communication link GSM/RF/Bluetooth/PC and IoT over the cloud i)Microcontroller/Arduino based Electronic Notice Board / Scrolling Message Display for College by communication links over GSM/Bluetooth/PC/Voice j)Microcontroller/Arduino based LED Lamp Dimmer Circuit by using communication links over RF/Bluetooth/DTMF/TV Remote/PC/Push Button	comparison whenever required. 3.8051+Push Button Development Motherboard: Qty:16 8051 motherboard with all standard connections having all 4 ports open ended mounted with a set of additional 8 push button switches S1 to 8 for imposing logic inputs manually. Use female to female jumper wires for interfacing to peripherals. Requires 5 volt DC 4.MAX232 Board +DB9 Male Qty:4 Equipped with MAX232 IC ,and DB9 male, Serial communication from RFID, GSM, GPS etc to microcontroller through (Rx,Tx) can be established . Needs 5V DC and straight serial cord (DB9) for interface. 5.MAX232 Board+DB9 Female Qty:2 Equipped with MAX232 IC ,and DB9 male, Serial communication from microcontroller (Rx,Tx) to PC / Laptop can be established . Needs 5V DC and straight serial cord (DB9) for interface. 6. 5 Load Relay Driver Module Qty:15 5 nos of 12 volt relay(Relay 1 to 5) with open ended NO-C-NC (N=Normally, NC=Normally closed, C= Common) contact terminals and all common terminal are shorted fed to another connector as Input for any external 6A load to get activated upon small signal from any microcontroller /Arduino.Requires 12V dc and very few sensing power from 5 signal sources 7.DTMF Encoder with Binary Output Qty:2 Module accepts input DTMF (Dual Tone Multi Frequency) tones for 8870 buffered by 7404 to develop 4 bit binary data (D0 to D3) for any microcontroller program to recognise the							

		tones digitally for further action 8.433 MHz RF+HT12E Encoder Qty:4 Complete RF transmitter module with encoder (HT12) to take 8 bit hardware selected adjustable address data and 4 bit soft data(D0 to D3) from any microcontroller to develop serial data O/P for the RF transmitter to transmit over a distance of 50 meters. 9.433 MHz RF+HT12D Decoder Qty:4 Complete receiver module with decoder to develop 4 bit soft data(D0 to D3) based on 8 bit matching hardware adjusted address data for any microcontroller while receiving corresponding serial data at DATA from the RF transmitter within 50 meters from the transmitter. 10.TSOP Module Qty:2 38 KHz modulated IR signal receiving sensor to develop logical output at O/p while faced with an obstacle ahead.Has also wide applications in IR remote signal sensing. Needs 5 V DC 11.ZVS Optocoupler+Four Back to Back SCR Qty:15 Four independent back to back connected SCR pair with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller signal through galvanically isolated optocoupler.It is used for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 12.ZVS Optocoupler + Four TRIACS Qty:15 Four independent triac with individual RC snubber networks to handle upto 6 A AC mains load from any microcontroller							

		signal through galvanically isolated ZVS optocoupler.Suitable for zero voltage switching for simple on / off of 4 separate loads upon command received at the opto input at J1 13.LCD Module for 4 Bit Input Module: Qty:11 16 character 2 line LCD display with adjustable intensity provision by 10K PRESET suitable for both 4 bit (D4 to D7 & controls at J1) alternatively 8 bit (D0 to D7 at J2) data input & 3 control input at J3. It needs additionally control circuit board using microcontroller and other accessories to complete specific projects.Needs 5vDC 14.Buzzer Amplifier Module Qty:3 Very little / tini input signal at I/p amplified by a transistor (BC547) to enable a buzzer sound louder. Needs 5 volt operational DC and millivolt sensing 15.IR Photodiode Pair Reflecting Module: Qty:6 IR diode (IR LED) & and photodiode (PHOTODIODE) placed side by side to receive reflected light while it faces any object ahead. Received light on the Photodiode is amplified by a transistor to develop logical output (O/p) with precise setting by a variable resistor 10K Preset.Requires 5 v Dc. Applications in RPM counting,and robotic sensing arrangement 16. 555 Module in Astable Mode: Qty:2 Free running oscillator for any frequency setting ideally upto 500 KHz or more till 2 MHz upon RC (R2 & C) time constant and by variable resistor (R2 Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 17.8051+ADC0804 Development Motherboard: Qty:1 8051 motherboard with all standard connections having all							

		ports open ended with one of the port internally wired for using single channel ADC 0804 .Use female to female jumper wires for interfacing to peripherals. Requires 5 volt Dc 18.Underground Cable Fault Detection Sensor: Qty:1 Equivalent to a 3 phase 4 wire (R,Y,B,Gnd) underground cable made on a PCB with 12 fault creating switches (SLIDE SWITCHES) and indexed cable resistance ,on individual phases at every designated extrapolated kilometer to feed the output to an ADC to forms as an input to a microcontroller board for calculating the fault distance in KMs.It needs additionally control circuit board using microcontroller, relay board, LCD display unit etc to complete the project in full. Needs 5v DC 19.WiFi Module using ESP8266 Qty:3 8 Pin tiny WiFi module with 2 nos IO (Input / output) with Rx Tx input programmable through Arduino editor to communicate to cloud through local wifi.Many possibilities on IOT.Needs 5 volt DC. Need not demand a microcontroller but specific loads operated through cloud . 20.Keypad 4x3 Qty:1 12 push buttons wired in matrix format ideally suitable for interfacing to microcontroller or tone decoder IC 21.Zero Voltage Sensing Module: Qty:1 Needs pulsating DC of about 12v & 5V DC to develop 5 V narrow pulses at zero cross of waveform using dual OP AMP LM358. Having dual OP AMPs it can be used both for voltage and current as well (ZVS1,ZVS2). 22.4 Way Traffic Junction Module							

		A 4 way traffic junction signal lighting system with red, green and amber LEDs in all four sides of a street junction terminated at connectors.Requires appropriate feed from any programmed microcontroller to complete a traffic junction project.Does not include microcontroller. 23.4 in 1- Segment Display Qty:1 4 parallel 7 segment common cathode display driven from any 8 pin port at J1 with 4 segment selection control input at J2. 24.555 in Monostable Mode Qty:1 In this 555 Timer is used in monostable mode ie one shot pulse based upon RC (R & C) time constant and by variable resistor (RV Variable) and fixed capacitor (C). Accepts wide operating voltage from 5 to 12 v DC. 25.Thermister based temperature Sensor Qty:1 Signal from a thermistor sensor is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate 26.Moisture Sensor Qty:1 Signal from a moisture sensor strip is compared against a preset value to develop a logic output at the signal points. And also Analog Pin is also out to take Analog Data. Need 5V DC to operate Accessories and Peripherals like Transformer, USB Cord, Heat Sink, Bluetooth,TV Remote, Adapter, Stereo Mobile Pin,.Connector DB9 Straight Cord, AA cell case, Lamp Holder, Bluetooth Module, GSM Module, 2.4 RF Module, Temperature Sensor, Etc							

		Innovation Manual Specification: Each guided innovation has detailed documentation complete with: a. Problem Definition b. Abstract c. Circuit diagram with full explanation d. Connection Diagram with connection details preferably in tabular form e. Self explained program codes f. Physical image together with functional explanations g. Output Video for real time functioning to be made available. **Tool Kit:** 1. Program Burner For 8051 Controller Qty:1 ATMEL 89 series 8051 USB Programmer is a full featured low cost programmer for most common 8051 microcontrollers. The Programmer works on USB port and can be used with Laptops. It comes with a full featured software which allows batch programming and saves time for mass programming requirements. **Innovation Kit Shell Qty:1** (Refer Annexure 1 for list of Innovations.) **Relevant Software and Firmware to be supplied along with the product.**							