

MUZAFFARPUR INSTITUTE OF TECHNOLOGY

COURSE FILE OF SUSTAINABLE DEVELOPMENT (COURSE CODE-24 1807)



FACULTY NAME:

**DR. PRABHANSU
ASSISTANT PROFESSOR,
DEPARTMENT OF MECHANICAL ENGINEERING**

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Muzaffarpur Institute of Technology, Muzaffarpur
Department of Mechanical Engineering

Vision

- To strengthen the region through imparting superior quality technical education and research; which enables the fulfillment of industrial challenge and establish itself as a Centre of Excellence in the field of Mechanical Engineering.

Mission

- To build an academic environment of teaching and lifelong learning for students to make them competitive in context with advance technological, economical and ecological changes.
- To enable the students to enhance their technical skills and communications through research, innovation and consultancy projects.
- To share and explore the accomplishments through didactic, enlightenment, R & D programs with technical institution in India and abroad.

Program Educational Objectives

- Graduates will spread and enhance their technical capability and proficiency through vital domain of economical, environmental and social concerns affiliated with the mankind and industry.
- Graduates will able to work professionally with modern methods in the area of Thermal, Mechanical System Design, Manufacturing, Measurement, Quality control and other interdisciplinary fields of concerns.
- Graduates will practice Mechanical engineering in sensible, flexible and ethical manner to benefit the society, industry and nation toward the rapidly changing global technical standards.
- Graduates will serve as ambassadors for engineering by their knowledge, creativity, imagination and innovation and set new extremes in their profession through lifelong learning.

Mechanical Engineering Student Outcomes

Students who complete the B.E. degree in ME will be able to:

1. An ability to apply the knowledge of mathematics, basic sciences and engineering concepts to solve the complex engineering problems.
2. The ability to conduct experiments and to critically analyze and interpret the experimental data to reach at substantial outcomes.
3. An ability to design systems, components, or processes to meet appropriate needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to identify, formulate, and solve the complex engineering problems.
5. An ability to function on multi-disciplinary teams that leads the multi-disciplinary projects.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively with written, oral, and visual means.
8. An ability to understand the impact of engineering solutions in a global, environmental, economical and societal context.
9. An ability to recognize the need to engage in life-long learning.
10. An ability to attain knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern tools necessary for Mechanical engineering practice.
12. Possess ability to estimate costs, estimate quantities and evaluate materials for design and manufacturing purposes.

Scope and Objectives of the Course

This course is designed to emphasize on growth in an environmental friendly manner within the Mechanical Engineering curriculum. Students will explore multi-faceted importance of environment in the theoretical and applied realm in the fields of engineering, industries, international trade, long term planning, free trade, and sustainable human development. The sustainable development curriculum is designed to prepare interested students for future careers in environmental engineering and management.

The course outcomes are:

1. Understand the balance that nature maintains in the ecosystem and the biosphere.
2. Apply precautionary principle into environment friendly growth of human being as a species.
3. Learn to maintain the link between globalization, environment and community.
4. Develop them into human beings that understand the importance of other forms of life.

Mapping of CO with PO

S.No	Course outcome	PO
1	Understand the balance that nature maintains in the ecosystem and the biosphere	PO1, PO3
2	Apply precautionary principle into environment friendly growth of human being as a species.	PO1, PO2, PO3
3	Learn to maintain the link between globalization, environment and community	PO1
4	Develop them into human beings that understand the importance of other forms of life	PO1, PO3, PO4

Course outcome	PO1	PO2	PO3	PO4
CO.1: Understand the balance that nature maintains in the ecosystem and the biosphere	√		√	
CO.2: Apply precautionary principle into environment friendly growth of human being as a species.	√	√	√	
CO.3: Learn to maintain the link between globalization, environment and community.	√			
CO.4: Develop them into human beings that understand the importance of other forms of life.	√		√	√

SYLLABUS

Topics	No of lectures	Weightage
Ecosystem: Concept, Type, Structure, Function; Ecological succession, Pyramid, degradation and its remedies from Unsustainable development to sustainable development, Concept of sustainable development: Social and environmental issues (local, national and international), Need for studying the economics for sustainable development	10	23.8%
Environment and Rehabilitation: Mined area, Habitats, Water bodies, Mangroves; Global Changes, Biodiversity concerns and precautionary principles, Evaluation of sustainable development	10	23.8%
Valuing Market and Non-Market Ecosystem: Use of monetary valuation, Cost benefit analysis, Technique of monetary valuation, Definition of conventional and green GNP	10	23.8%
International trade and sustainable development: Free trade and globalization vs environment and community, obstacle of free trade	08	19%
Strategic approaches and laws to sustainability: New international institutional contexts, commission on sustainable development; Environmental ethics and laws, India's move towards sustainable development	04	9.5%

Time Table

MUZAFFARPUR INSTITUTE OF TECHNOLOGY B.Tech. 8th (Eighth) Semester (2014 Batch) TIME TABLE w.e.f 09.02.2018

DAY	Branch	I (10-10.50AM)	II (10.50-11.40AM)	III (11.40-12.30PM)	IV (12.30-01.20PM)	V (01.50-2.40PM)	VI (2.40-3.30PM)	VII (3.30-4.20PM)
MON	Mech	IndPoln (IY) 53	M.I.S.(AK) 53	S.Devmt(PBH) 53	MSD (SG) 53	R	MSD LAB (SG)/ S.Devmt (T)(PBH) 53	
	Elect			M CTRL Th(NK)50	P.M.&I.R.(H) 50		PROJECT (MAJOR) (YNS) 50	
	Civil		CnsPI&Mgt(SIK) 37	TPSy&Ping(PK) 37	R.H.&S.T.(AR)37			
	EC		M.W.Eng(RK) EB3	CmpNWK(A-IT) EB3	Mic. Cont. (SK) EB3			LINEAR CTRL THEO(FA+HCV)
	IT		XML W.SV(---)EB5	Mm T.Ap(---) EB5	IntrnDtcn(---) EB5			XML WEB SERVICES LAB (---)
	LT			E-II S&C Chm(SK)LB1				TnrWstMgt(AK)LB1 P.L.Mfg-III (NK)LB1
PHAR	Ph Chem VIII(RPK) LB1	Pharmacology-IV(AB)LB1	Pharctcs-X(VP)LB2	PharcgnsyVI(NRB)LB1		PROJECT & VIVA-VOICE (SK/SNS)		
TUE	Mech	IndPoln (IY) 53	MSD (SG) 53	S.Devmt(PBH) 53	M.I.S.(AK) 53	E	MSD LAB (SG)/ S.Devmt (T)(PBH) ITB	
	Elect		PROJECT (MAJOR) (YNS) 50					SEMINAR (RSS) 50
	Civil		EIA (SM) 37	CnsPI & Mgt(SIK) 37	IrgnEngg (SS) 37			PROJECT-II (IN CONTINUATION)(SK/AKR/SIK/CBR/AR) 37
	EC	Mic. Cont. (SK) EB3		PROJECT - II (SK /RK /MK) EB3				MICROWAVE ENGG LAB.(RK/ MK)
	IT		E-COM& ERP(---)EB5	XML W.SV(---) EB5	N.SECU(---)EB5			PROJECT WORK (AK/VK/KP5) EB5
	LT	L.P.Tech-III (MK)LB1		PRACTICES OF LEATHER MANUFACTURING-III(MK)				EL-III TQM (SK)LB1 E-II S&C Chm(SK)LB1
PHAR	PharcgnsyVI(NRB)LB2	Pharmacology-IV(AB)LB1	Pharctcs-X(VP)LB1	Ph. ChemVIII(RPK)LB1		PROJECT & VIVA-VOICE (OPT/NRB/RCC)		
WED	Mech	IndPoln (IY) 53	M.I.S.(AK) 53	S.Devmt(PBH) 53	MSD (SG) 53	C	PROJECT-IT B(RKR/SK/NK)	
	Elect	SGP(HCV)50	P.M.&I.R.(H) 50	Pwr S Des(YNS)50			POWER SYSTEM DESIGN (YNS+HCV)	
	Civil	TPSy&Ping(PK) 37	PROJECT-II (IN CONTINUATION)(SK/AKR/SIK/CBR/AKH) 37					R.H.&S.T.(AR) 37
	EC	M.W.Eng(RK) EB3		PROJECT - II (SK /RK /MK) EB3				INF SECU(A-IT) EB3 CmpNWK(A-IT) EB3
	IT		Mm T.Ap(---) EB5	IntrnDtcn(---) EB5	N. SEC(---)EB5			PROJECT WORK (AK/VK)EB5
	LT	PROJ. Work(SK)LB1		PROJECT WORK(MK/AK/SK/MKR)				P.L.Mfg-III (MK)LB1 TnrWstMgt(AK)LB1
PHAR	Pharmacology-IV(AB)LB2	PharcgnsyVI(NRB)LB1	Ph ChemVIII(RPK)LB1	Pharctcs-X(VP)LB1				
THU	Mech	PROJECT- 53 (PBH/AK/SG)				E	PROJECT- ITB (MDU/V/NKD)	
	Elect	SGP (HCV)50	SGP (HCV)50	M CTRL Th-T(NK) 50	M CTRLTh-T(NK) 50		PROJECT (YNS) 50	
	Civil		Irgn Engg (SS) 37	EIA (SM) 37	R.H.&S.T.(AR) 37		PROJECT-II (IN CONTINUATION)(SK/AKR/SIK/CBR/PK) 37	
	EC		L.CTR.TH(FA) EB3	INF SECU(A-IT) EB3	Mic. Cont.(SK) EB3		MICROWAVE ENGG(RK/MK) / LINEAR CTRL THEO(FA+HCV)	
	IT		E-COM& ERP(---)EB5	XML W.SV(---) EB5	Mm T.Ap(---) EB5		PROJECT WORK (AK/VK) I	
	LT			LEATHER PRODUCT TECHNOLOGY-II (MK)			EL-III TQM (SK)LB1 E-II S&C Chm(SK)LB1 L.P.Tech-III (MK)LB1	
PHAR		PHARMACEUTICS - IX LAB (VP)				PROJECT & VIVA-VOICE (SNS/SK/OPT)		
FRI	Mech	PROJECT- 53 (GK/MH/NBH)53				S	PROJECT (YNS) 50	
	Elect	SGP (HCV)50	P.M.&I.R.(H)50	M CTRL Th(NK)50	Pwr S Des(YNS)50		Contract Specification & Estimation (AKH+SIK) 37	
	Civil		Irgn Engg (NK)37	EIA (SM) 37	TPSy & Ping(PK) 37		INF SECU(A-IT) EB3 M.W.Eng(RK) EB3	
	EC	INF SECU(A-IT) EB3	L.CTR.TH(FA) EB3	CmpNWK(A-IT) EB3	M.W.Eng(RK) EB3			TnrWstMgt(AK)LB1 P.L.Mfg-III (NK)LB1
	IT		N.SECU(---)EB5	IntrnDtcn(---) EB5	E-COM& ERP(---)EB5			PROJECT & VIVA-VOICE (RCC/SNS/NRB)
	LT	EL-III TQM (SK)LB1		TANNEY WASTE MANAGEMENT(AK)			PROJECT(ANK/ARN/SKY)- 53	
PHAR		PHARMACEUTICAL CHEMISTRY - VIII LAB (RPK)						
SAT	Mech	IndPoln (T)(IY) 53	IndPoln (T)(IY) 53			S	PROJECT(ANK/ARN/SKY)- 53	
	Elect		PROJECT MAJOR (YNS)50					
	Civil	CnsPI&Mgt(SM) 37	PROJECT-II (IN CONTINUATION)(SK/AKR/SIK/CBR/NK)37					PROJECT-II (IN CONTINUATION)(SK/AKR/SIK/CBR/PS) 37
	EC	Mic. Cont(I) (SK) EB3	PROJECT - II (RK/MK/SK)EB3					L.CTR.TH(FA) EB3
	IT		XML WEB SERVICES LAB (---)					
	LT	L.P.Tech-III (MK)LB1	PROJECT WORK(MK/AK/SK/MKR)					
PHAR		PHARMACOGNOSY - VI LAB.(NRB)						

Asst.Prof.-in-charge (TT)

Prof.-in-charge (TT)

Principal

List of Students

S. No	Roll No.	Name
1	13M44	RAHUL KUMAR
2	13M52	KUMAR CHANDRA DEV
3	14M34	JAI HIND KUMAR
4	14M01	PRANESH KUMAR SINGH
5	14M02	SHEETAL RANJAN SAH
6	14M03	ADIL FAZAL
7	14M04	PREETAM KUMAR
8	14M05	AMRITANSH ANAND
9	14M07	PRANAV KUMAR
10	14M08	NADEEM ANSARI
11	14M09	SATISH ANAND
12	14M11	SUBIR KUMAR
13	14M12	SUMIT SAURAV
14	14M13	AMIT KUMAR
15	14M14	SHARAD BHASKAR
16	14M15	GAUTAM KUNAL BHARTI
17	14M16	MANJEET KUMAR
18	14M17	RAKESH KUMAR
19	14M18	HRISHIKESH JHA
20	14M19	ROHIT KUMAR
21	14M23	GAURAV KUMAR
22	14M24	SONU KUMAR
23	14M25	TRISHANT KUMAR
24	14M27	HARI KANT UPADHYAY
25	14M28	NIKHIL ARK
26	14M29	NIKHIL KUMAR
27	14M30	SUBHANSHU MISHRA
28	14M31	SHUBHAM PANDEY
29	14M32	PANKAJ KUMAR
30	14M33	SUDHANSHU SAURAV
31	14M35	PANKAJ KUMAR
32	14M36	SHUBHAM VERMA
33	14M37	PINTU KUMAR
34	14M38	SURAJ KUMAR
35	14M39	AASHNA RAJ
36	14M40	MD IRSHAD
37	14M41	MANISH KUMAR JHA
38	14M43	RAJESH RANJAN
39	14M46	SANJEET KUMAR
40	14M47	SAURABH PANDEY
41	14M48	SANJEEV KUMAR
42	14M50	RAHUL KUMAR

43	14M06	SHIVANI RAJ
44	14M10	KIRTY RATAN
45	14M20	RAMA SHANKAR RAVI
46	14M26	MD IMBESAT ANSARI
47	14M21	MANISH KUMAR
48	14M44	ABHISHEK KUMAR
49	14M45	PARAS KUMAR DEO
50	14M49	MODASSIR SABA NAJMI
51	14M52	AYUSH PRIYAM
52	14M53	MAYANK
53	14M56	ABHIJEET
54	14M57	RAMESH KUMAR
55	14M58	SAGEER KUMAR SANU
56	14M59	ASAF MOHAMMAD KHAN
57	14M60	PUNYANIDHI
58	14M62	AMISH RAJ
59	14M54	VISHAL KUMAR
60	15(LE)M12	DIPAK KUMAR PASWAN
61	15(LE)M11	ANKITA KUMARI
62	15(LE)M01	SOURAV BHARTI
63	15(LE)M03	AFROJ ALAM
64	15(LE)M08	RAJBIRENDRA RAVIDAS
65	15(LE)M09	AKHILESH KUMAR
66	15(LE)M02	VISHAL KUMAR
67	15(LE)M07	JIMMY KUMAR
68	15(LE)M06	SANDEEP KUMAR
69	14M61	RITESH KUMAR
70	15(LE)M10	RAJU RANJAN

Course handout

Institute / College Name :	MUZAFFARPUR INSTITUTE OF TECHNOLOGY		
Program Name	B.E. MECHANICAL		
Course Code	24 1807		
Course Name	SUSTAINABLE DEVELOPMENT		
Lecture / Tutorial (per week):	3/1	Course Credits	4
Course Coordinator Name	DR. PRABHANSU		

Textbooks

1. S. Deswal, A. Deswal, An Introduction to environmental science, DhanpatRai and Co.
2. N. Das Gupta, Environmental Accounting, Wheeler and co.
3. Daly H.E, Beyond Growth: The Economics of Sustainable Development, Beacon Press
4. D.K. Asthana, MeeraAsthana, Environmental Science, S. Chand and co.
5. P.Rogers, K.F Jalal and J.A Boyd, An introduction to sustainable development, Earthscan

Reference Books

1. Willian P. Cunningham, Mary Ann Cunningham, Principles of environmental science, T.M.H

Other readings and relevant websites

S.No.	Link of Journals, Magazines, websites and Research Papers
1.	https://www.journals.elsevier.com/ecosystem-services
2.	https://www.omicsonline.org/ecosystem-ecography.php
3.	https://link.springer.com/journal/10021
4.	www.tandfonline.com/toc/tbsm21/current
5.	www.journal.sapub.org/ije/
6.	www.discovermagazine.com/tags/ecosystems

Course Plan

Lecture Number	Date of Lecture	Topics	Web Links for video lectures	Text Book / Reference Book / Other reading material	Page numbers of Text Book(s)
1-2		Introduction			
		Background, Ecosystem: definition , food chain, food web, Type, autotrophs and heterotrophs, food pyramid, examples, ecological succession, biosphere	https://www.youtube.com/watch?v=JPHqUxxyLsY https://www.youtube.com/watch?v=MWPj2IkekII	https://en.wikipedia.org/wiki/Ecosystem	
Tutorial - 1					
3-4		Importance of sustainable growth			
		Degradation of ecosystem, human involvement, remedial measures, unsustainable to sustainable development	https://www.coursehero.org/.../what-is-land-degradation-and-how-does-... https://www.ukessays.com/.../issues-of-environmental-degradation-...	https://en.wikipedia.org/wiki/Environmental_degradation	
Tutorial – 2, Assignment I					
5-7		Social and environmental issues			
		Analysis of social and environment related issues relevant to local, state, nation and global	https://study.com/.../environmental-impact-societys-relationship-an...	https://firstforsustainability.org/...environmental...social.../environmental-and-social-issu...	
Tutorial - 3					
8-10		Importance of economics			
		Need to study economics, sustainable growth and	https://www.youtube.com/watch?v=P	https://econ.uic.edu/economics/why-	

		economics	ETPLXuuoIQ https://study.com/..../what-is-economics-definition-history-timeline-..	study-economics	
Tutorial – 4, Assignment 2					
11-14		Environment and Rehabilitation			
		Eco system in Mined area, Habitats, Water bodies, Mangroves, its case study, rehabilitation	https://www.csiro.au/en/Research/Environment/.../Chapter-11	https://en.wikipedia.org/wiki/Land_rehabilitation	
15-18		Major concerns			
		Global Changes, Biodiversity concerns and precautionary principles	https://nca2014.globalchange.gov/.../observed-change	https://en.wikipedia.org/wiki/Global_change	
19-20		Evaluation of sustainable development			
		Critically analyze the development in a sustainable way.	https://www.youtube.com/watch?v=SWIMuFUEIKo https://www.youtube.com/watch?v=xgUGjUYbQrM	https://www.iied.org/effective-evaluation-for-sustainable-development-goals	
21-26		Valuing market and non market ecosystem			
		Use of monetary valuation, cost benefit analysis, technique of monetary valuation	https://www.youtube.com/watch?v=zmGD8Bk97PI https://www.youtube.com/watch?v=M0ZdV5WU5K4	https://www.nap.edu/read/11139/chapter/6 https://en.wikipedia.org/wiki/Ecosystem_valuation	
27-30		Green gross national product			
		Definition of	https://www.youtube.com/watch?v=M0ZdV5WU5K4	https://en.wikipedia.org/wiki/Green_gross_national_product	

		conventional and green GNP	be.com/watch?v=FfPcOs_uRIM https://www.ukessays.com/.../differences-between-gross-domestic-...	org/wiki/Green_gross_domestic_product	
Tutorial - 5					
Mid-Semester Exam (Syllabus covered from 1-30 lectures)					
31-38		International trade and sustainable development			
		Free trade and globalization vs environment and community, obstacle of free trade	www.europarl.europa.eu/ep-live/en/committees/video?event... www.fao.org/webcast/home/en/item/4487/icode/	https://www.ictsd.org/.../International%20Trade%20and%20Sustainable%20Development...	
39-43		Strategic approaches and laws to sustainability			
		New international institutional contexts, commission on sustainable development, environmental ethics and laws, India's move towards sustainable development	https://www.coursehero.org/.../strategy-sustainability/.../2-take-the-low-r...	https://www.epa.gov/sustainability/strategic-approach-sustainability	
Tutorial 6, 7, 8 and Assignment 3					

1. **Evaluation Scheme:**

Component 1	Mid Semester Exam	20
Component 2	Assignment Evaluation	10
Component 3**	End Term Examination**	70
	Total	100

** The End Term Comprehensive examination will be held at the end of semester. The mandatory requirement of 75% attendance in all theory classes is to be met for being eligible to appear in this component.

Evaluation and Examination Blue Print:

Internal assessment is done through quiz tests, presentations, assignments and project work. Two sets of question papers are asked from each faculty and out of these two, without the knowledge of faculty, one question paper is chosen for the concerned examination. Examination rules and regulations are uploaded on the student's portal. Evaluation is a very transparent process and the answer sheets of sessional tests, internal assessment assignments are returned back to the students.

The components of evaluations alongwith their weightage followed by the University is given below

Sessional Test 1	20%
Assignments/Quiz Tests/Seminars	10%
End term examination	70%

Teachers Diary

Institute Name :	Muzaffarpur Institute of Technology Muzaffarpur		
Program Name	B.Tech. ME		
Course Code	24 1807		
Course Name	Sustainable Development		
Lecture / Tutorial (per week):	3/1	Course Credits	4
Course Coordinator Name	DR. PRABHANSU		

Topics	Lecture Period	Date on which the Lecture was taken
Ecosystem:		
Ecosystem: Concept, Type, Structure, Function	01.50-02.40 PM	08.02.2018
Ecological succession, Pyramid,	11.40-12.30 PM	12.02.2018
Degradation and its remedies from Unsustainable development to sustainable development	01.50-02.40 PM	12.02.2018
Concept of sustainable development	11.40-12.30 PM	13.02.2018
Social and environmental issues (local, national and international)	01.50-02.40 PM	13.02.2018
Need for studying the economics for sustainable development	02.40-3.30 PM	13.02.2018
Need for studying the economics for sustainable development	3.30-04.20 PM	13.02.2018
Environment and Rehabilitation:		
Mined area, Habitats,	11.40-12.30 PM	19.02.2018
Water bodies, Mangroves	11.40-12.30 PM	20.02.2018
Global Changes	01.50-02.40 PM	20.02.2018
Biodiversity concerns and precautionary principles	02.40-3.30 PM	20.02.2018
Evaluation of sustainable development	3.30-04.20 PM	20.02.2018
Valuing Market and Non-Market Ecosystem		
Use of monetary valuation	11.40-12.30 PM	21.02.2018
Cost benefit analysis, Technique of monetary valuation	11.40-12.30 PM	27.02.2018
Definition of conventional and green GNP	01.50-02.40 PM	27.02.2018
International trade and sustainable development		

Free trade and globalization vs environment and community	02.40-3.30 PM	27.02.2018
Free trade and globalization vs environment and community	3.30-04.20 PM	27.02.2018
obstacle of free trade	11.40-12.30 PM	12.03.2018
obstacle of free trade	11.40-12.30 PM	13.03.2018
Strategic approaches and laws to sustainability		
New international institutional contexts	01.50-02.40 PM	13.03.2018
New international institutional contexts	02.40-3.30 PM	13.03.2018
commission on sustainable development	3.30-04.20 PM	13.03.2018
India's commission on sustainable development	11.40-12.30 PM	19.03.2018
Environmental ethics and laws	11.40-12.30 PM	20.03.2018
Environmental ethics and laws	01.50-02.40 PM	20.03.2018
Environmental ethics and laws	02.40-3.30 PM	20.03.2018
Critically analyze the development in a sustainable way.	3.30-04.20 PM	20.03.2018
Critically analyze the development in a sustainable way.	11.40-12.30 PM	21.03.2018
India's move towards sustainable development	11.40-12.30 PM	26.03.2018
India's move towards sustainable development	11.40-12.30 PM	27.03.2018
Revision	11.40-12.30 PM	28.03.2018
Revision	11.40-12.30 PM	10.04.2018
Previous year question discussion	01.50-02.40 PM	10.04.2018
Previous year question discussion	02.40-3.30 PM	10.04.2018
Previous year question discussion	3.30-04.20 PM	10.04.2018



MUZAFFARPUR INSTITUTE OF TECHNOLOGY

Department of Mechanical Engineering
241807 Sustainable Development

Assignment I

1. Define ecosystem. What are the characteristics of an ideal ecosystem?
2. Explain sustainable development. Write down different approaches to achieve sustainable development.
3. Define biodiversity. What are the reasons for decline of biodiversity?
4. Explain Green Accounting
5. Give a brief overview of existing monetary valuation techniques in context with ecosystem.
6. Discuss Social issues in Sustainable development.



MUZAFFARPUR INSTITUTE OF TECHNOLOGY

Department of Mechanical Engineering
241807 Sustainable Development

TUTORIAL SHEET-1

1) What are the problems you have faced during your four year BTech programme. Now after 5 years, you have become district magistrate of Muzaffarpur. What measures you are going to take to improve the city socially, environmentally in a sustainable manner?



MUZAFFARPUR INSTITUTE OF TECHNOLOGY

Department of Mechanical Engineering
241807 Sustainable Development

Semester-8

Mid Term Exam (Full marks-20)

Answer any five questions

1. Define ecosystem. What are the characteristics of an ideal ecosystem? [4]
2. Explain sustainable development. Write down different approaches to achieve sustainable development. [4]
3. Define biodiversity. What are the reasons for decline of biodiversity? [4]
4. Give a brief description of mangrove habitat. [4]
5. What do you understand by economic growth of a nation? [4]
6. Discuss international issues in Sustainable development. [4]

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Code : 241807

B.Tech. 8th Semester Exam., 2017

Sustainable Development

Time : 3 hours

Full Marks : 70

Instructions :

- (i) *The marks are indicated in the right-hand margin.*
- (ii) *There are NINE questions in this paper.*
- (iii) *Attempt FIVE questions in all.*
- (iv) *Questions No. 1 is compulsory.*

1. Answer seven of the following/Fill in the blanks:

- (a) Define "Ecosystem".
- (b) "Sustainable development is the only way left for human survival". Give your comment.
- (c) Differentiate between "Non-Renewable resource and Renewable resource".
- (d) What do you mean by "Sustainable management of water resources"?
- (e) The historic convention on Biological Diversity held in Rio de Janeiro in 1992 is known as Biosphere Convention.
- (f) 16th Sept. (date) is celebrated as International Day for the Preservation of the Ozone Layer.

P.T.O.

(g) World Environmental Day is celebrated on 5th June
(date).

(h) What is ecology?

(i) Biological Diversity Act in India was passed in the
year... 2002.....

(j) CNG stands for Compressed natural gas (7×2)

2. (a) Define ecosystem. Describe common
characteristics of most of the ecosystem according
to Smith.

(b) What are the characteristics of an ideal ecosystem?
Explain. 7+7

3. (a) What is ecological pyramids ? Discuss.

(b) Explain the term "Green Accounting". 7+7

4. (a) State and explain "Sustainable development".

(b) What are the recent approaches to achieve
sustainable development? 7+7

5. (a) Define "Biodiversity" and explain the three major
components of biodiversity.

(b) What do you understand by "Hot spots of
Biodiversity"? Name and briefly describe the two
hot spots of biodiversity that extends into India.

7+7

6. (a) Discuss major environmental impacts of mineral extraction. Suggest measures to minimise the adverse impacts of mining.

(b) Why afforestation is needed ? Suggest some measures for the conservation of forests. 7+7

7. What is ozone ? How does ozone protect the life on earth? State the reasons for ozone depletion. 14

8. (a) Discuss the effects of free trade and globalization on environment and sustainability.

(b) List the effects of population explosion. 7+7

9. Write short notes on any four of the following: 14

(i) Ecological succession

(ii) Evaluation of sustainable development

(iii) Commission on sustainable development

(iv) Social issues in sustainable development

(v) Strategies for conservation of Biodiversity

Question Bank

1. What is sustainable development?

- A. The development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- B. To conserve natural resources and to develop alternate sources of power while reducing pollution and harm to the environment.
- C. It is the practice of developing land and construction projects in a manner that reduces their impact on the environment by allowing them to create energy efficient models of self-sufficiency.
- D. All of the above

Ans: D

2. Which of the following is correct, if we only achieve two out of three pillars of Sustainable Development?

- A. Social + Economic Sustainability = Equitable
- B. Social + Environmental Sustainability = Bearable
- C. Economic + Environmental Sustainability = Viable
- D. All of the above

Ans: D

3. Consider the following statement (s) related to the Sustainability.

- I. It refers to a process or state that can be maintained indefinitely.
- II. Natural resources must use in ways that do not create ecological debts by over exploiting the carrying and productive capacity of the earth.
- III. A minimum necessary condition for sustainability is the maintenance of the total natural capital stock at or above the current level.

Code:

- A. Only I
- B. Only II

C. Only II & III

D. I, II & III

Ans: D

4. Which of the following is/are not an objective (s) of sustainable development?

A. Continue to implement the family planning program.

B. Maintain a dynamic balance of arable land (not less than 123 million hectares) and implement an agricultural development strategy

C. Maintain a dynamic balance of water resources by reducing water consumption for every unit of gross development product growth and agricultural value added

D. To bring about a gradual and sometime catastrophic transformation of environment

Ans: D

5. What are the Primary Goals of Sustainability?

I. The end of poverty and hunger

II. Better standards of education and healthcare - particularly as it pertains to water quality and better sanitation

III. To achieve gender equality

IV. Sustainable economic growth while promoting jobs and stronger economies

Code:

A. I, II & III

B. I, III & IV

C. I & III

D. I, II, III & IV

Ans: D

6. When was the term 'Sustainable Development' came into existence?

A. 1987

B. 1980

C. 1978

D. 1992

Ans: B

7. The United Nations Commission on Sustainable Development (CSD) was established by the UN General Assembly in December-----.

A. 1992

B. 1993

C. 1994

D. 1995

Ans: A

8. Which of the following UN commission is responsible for reviewing progress in the implementation of Agenda 21 and the Rio Declaration on Environment and Development?

A. United Nation Disarmament Commission

B. United Nations Statistical Commission

C. United Nations Commission on Sustainable Development (CSD)

D. United Nations Commission on Human Rights

Ans: C

9. Consider the following statement (s) related to the parameters of sustainable development refer to the guiding principles.

I. Help in understanding the concept of sustainable development

II. Point the problems associated with it

III. Help to take active policy measures

Code:

A. Both I & II

B. Bot II & III

C. Both I & IV

D. I, II & III

Ans: D

10. Which of the following is not included in the parameters of sustainable development?

A. Carrying capacity

B. Inter and Intra-generation equity

C. Gender disparity and diversity

D. None of the above

Ans: D

Lecture Notes

Evaluation of S.D

Goal 1: End poverty in all its forms everywhere

Sustained growth (6.2% from 1993-94 to 2003-04 and 8.3% from 2004-05 to 2011-12) has created gainful employment and helped raise wages thereby directly empowering the poor.

The Mahatma Gandhi National Rural employment Guarantee Act, has generated over 2 billion person-days of employment during 2016-17 also.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Stunting among children less than 5 years has declined from 48% to 38.4% between 2005-06 and 2015-16. During the same period, the percentage of underweight children has declined from 42.5% to 35.7%.

More than 800 million people are benefited in India by providing the food grains at affordable prices through the public distribution system.

The mid-day meal programme is providing nutritious cooked meals to 100 million children in primary schools. (2)

Goal 3: - Ensure healthy lives and promote well being for all at all ages.

Infant mortality rate has declined from 57 in 2005-06 to 41 in 2015-16. Similarly under 5 mortality rate has fallen from 74 to 50 over the same period.

Institutional deliveries has increased from 38.7% in 2005-06 to 78.9% in 2015-16.

Towards achieving universal health coverage, a health insurance cover of ₹ 100,000 is being extended to all poor families.

Goal 5: - Achieve gender equality and empower all women and girls.

68.4% of women were literate in 2015-16 as compared to 55.1% in 2005-06.

Additionally, 53% of women were independently using a bank or saving account in 2015-16, which is a significant improvement from 15.1% in 2005-06.

Schemes & Initiatives such as Beti Bachao Beti Padhao initiatives focuses on a comprehensive package of interventions for the girl child including those pertaining to education and protection.

The maternity benefit programme protects women from wage loss during the first six months after child birth.

Goal 9 :- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

The installed capacity in non-fossil fuel sectors has grown by 51.3% and more than doubled in the renewable energy sector (solar, wind, bio and small hydro power).

India is making efforts to become an Information Technology and manufacturing hub through its 'Make in India' campaign. These efforts have greatly accelerated FDI inflows and helped the country sustain an avg. growth of 7.5% during the last three financial years (2014-15 to 2016-17). (4)

Goal 14 - Conserve and Sustainably use the oceans, seas and marine resources.

A clear agenda has been formulated for promoting 'Blue Revolution'. For tracking the levels of marine pollution along the coastline, the country has developed the coastal ocean monitoring and prediction system.

Further, the integrated National Fisheries Action Plan, 2016 is being implemented to promote the livelihoods of fishing communities as well as the ecological integrity of the marine environment.

Goal 17 :- Revitalize the global partnership for sustainable development. (5)

Despite significant efforts for domestic resource mobilisation, India is unlikely to gather sufficient revenues for achieving the SDGs. Therefore, India reiterates that the developed countries have an essential obligation to provide financial assistance to the developing countries.

A path breaking tax reforms like Goods and Services Tax (GST), a uniform and simplified form of indirect taxation.

An innovative tax like the Swachh Bharat Cess (Clean India Cess) has also been levied for mobilizing resources for the Clean India Mission.

Proactive policy reforms have boosted the FDI flows during the last ^{three} fiscal years to USD 156 billion including a record breaking USD 56 billion in the last fiscal year.

South Asia satellite was launched in May 2017 for sharing data with neighbours. (6)

Lastly, efforts are underway at the national level for finalizing the indicators that will enable monitoring of the progress made on the SDGs.

Valuing market and non-market ecosystem (7)

Where an ecosystem's services and goods can be identified and measured, it will often be possible to assign values to them by employing existing economic valuation methods. The emerging desire to measure the environmental costs of human activities or to assess the benefits of human evaluation in both the ecological and social sciences. Some ecosystem goods and services cannot be valued because they are not quantifiable or because available methods are not appropriate or reliable. Economic valuation methods can be complex and demanding and the results of applying these methods may be subject to judgement, uncertainty and bias. However, based on an assessment of a very large literature on the development and application of various economic valuation methods, the committee concludes that they are mature and capable of providing useful information in support of improved environmental decision-making.

Use of Monetary valuation

(8)

Monetary valuation is the practice of converting measures of social and biophysical impacts into monetary units and is used to determine the economic value of non-market goods i.e., goods for which no market exists.

It is applied in cost benefit analysis to enable the cross-section comparison between different impacts and/or with other economic costs and benefit. Monetary valuation allows for the overall assessment of a project, when the total monetarised and discounted environmental, economic and social impacts are aggregated into a single score (Net present value, NPV). If $NPV > 0$ the project is worth carrying out. Alternative projects can, hence, be compared and the one with the highest NPV is deemed superior to all other.

Cost benefit analysis

(9)

Cost-benefit analysis (CBA), sometimes called benefit cost analysis (BCA), is a systematic approach to estimate the strengths and weaknesses of alternatives (for example in transactions, activities, functional business requirements or project investments); it is used to determine options that provide the best approach to achieve benefits while preserving savings. The CBA is also defined as a systematic process for calculating and comparing benefits and costs of a decision, policy (with particular regard to government policy) or (in general) project.

Broadly, CBA has two main purposes:

1) To determine if an investment/decision is sound (justification/feasibility) - verifying whether its benefits outweigh the costs, and by how much.

2) To provide a basis for comparing projects - which involves comparing the total expected cost of each option against its total expected benefits.

Technique of monetary valuation

10

A variety of methods can be used to estimate the monetary value of ecosystem goods and services (EGS), each with its own advantages and limitations. Different methods can be applied based on the type of policy use and amount of resource available to practitioners. Monetary valuation is often classified according to the following three categories:-

- ① Revealed preference methods use observations of individuals' choices in existing markets to estimate monetary values of goods and services. Individuals are said to reveal their preferences through their choices; for example, travel costs can be used to estimate willingness to pay for recreational services.
- ② Market-based approaches, a subset of revealed preference, rely on direct, observable market interactions to estimate monetary values of goods and services. For example, market prices may be used to estimate the value of EGS that are not traded in a market (e.g., non-marketed timber, forest products and fish).

③ stated preference valuation methods gather information concerning environmental preferences through the use of surveys, questionnaires or interviews. (11)

Definition of conventional and green GNP

The national income and output in economics can be measured in several ways.

Gross national product (GNP) is the sum products and services generated by a nation or region annually by the labor and property of the citizens. GNP is the total of the GDP and any income generated by the people from foreign investment less the income generated domestically by the foreign residents.

However, GNP has faced criticism because it does not put into account the effects of environment and resource depletion. A new approach which considers these omissions known as the green national product (Green GNP) has been invented.

Criticism of the Green National Product

The green national product aims to allocate the omitted environmental degradation and resource depletion in the computation of the gross national product. The green national product indicates whether the activities involved in the production process benefits or harms the economy and the welfare. It revolves around social and economic factors which have been points of focus for many green movements. The green national product is different from the traditional GNP because it addresses both sustainability and the welfare of the planet and its inhabitants. Thus, the aspect of green accounting has gained considerable attention in recent years around the world.

2) Development of the green national product
Scientists and economists for a long period (13)
have observed that expansion of an
economy is inevitably limited by the
ever increasing rate of depletion of
natural resources. This observation led to
the questioning of GNP as a measure of
growth. The invention of measure of economic
welfare (MEW) in 1973 by W.D. Nordhaus and James
Tobin indicated that nations that deplete their
stock are not as well as was suggested by
the national income. Thereafter came Genuine
Progress Indicator (GPI) in 1995 as an
alternative to Gross national product.
Its unsuccess gave rise to Green national
Product (GNP).

International trade and sustainable development

14

The 2030 agenda for sustainable development recognizes international trade as an engine for inclusive economic growth and poverty reduction, and an important means to achieve the sustainable development goals (SDGs)

UNCTAD (United Nations conference on trade and development) together with ITC (International trade community) and WTO (World Trade Organization) provides and updates the trade-related global indicators of the sustainable development goals (SDGs)

Free trade and globalization vs Environment and community (15)

Globalisation is the process by which all peoples and communities come to experience an increasingly common economic, social and cultural environment. By definition, the process affects everybody throughout the world.

A more integrated world community brings both benefits and problems for all; it affects the balance of economic, political and cultural power between nations, communities and individuals and it can both enhance and limit freedoms and human rights. Social workers, by the nature of their work, tend to meet those who are more likely to have suffered the damaging consequences of some aspects of globalisation.

People live and develop their potential in social groups. Throughout recent history, the ethnic group and nation state have been defining characteristics of human society. Throughout the late 20th century and into the 21st century, people have increasingly found themselves in a

globalised world, with economic, social and cultural influences coming from many different sources. This process has challenged human and social rights and affected individual and social development. The nation state and ideas of ethnicity and social cohesion have been challenged by these influences. This process has become known as globalisation. (16)

People share a common need for an a right to a fair share of the earth's resources, including a clean, safe and healthy environment. These basic requirements are under threat from climate change and environmental degradation. These challenges are widely recognised as presenting the greatest priority for global co-operation. The degradation of the global environment has observable social and economic consequences and therefore has an impact on the ability of people and communities to achieve their potential as human beings and give expression to their human rights.

Obstacle of free trade

(17)

Free trade refers to that which allows a country to trade competitively with another country as there are no tariffs or restrictions regarding what can be exported or imported. The main benefit of free trade is an economic one as it allows countries to specialise and concentrate on their comparative advantages, which can be defined as things they do better than other countries. As a result of countries producing according to their comparative advantage, goods and services can be made with as little cost and possible and therefore all countries are able to obtain goods and services more cheaply than if they had to produce them themselves, as well as obtaining them all year round. If countries can trade freely and easily, there is greater competition in the market, which promotes efficiency as producers look to reduce the costs of production and innovate to increase demand. Often, free trade and greater competition can lead to specialisation as countries focus on the good in which they are better at producing. Similarly, this allows

customers with a wider choice and often (18)
with higher quality products. Finally, the
increased and more open trade that free
trade promotes will encourage economic,
political and cultural links between countries.

on the other hand, there are
several factors which can limit free trade
and make it hard to achieve in reality.

Firstly, the theory of free trade assumes there
is perfect mobility of labour, when in
reality factors of production such as
labour, land and capital may be fixed or
not completely mobile. Similarly, many
countries trade in different currencies
and so exchange controls can limit the
amount of foreign currency that comes into
a country. Protectionism is also a big
obstacle to free trade as many countries look
to protect their economies through using
restrictions to trade. Barriers to the entry
of goods into a country can be imposed
such as tariffs, taxes imposed on
imports, and quotas, limits the quantity

of certain products that can be imported. (19)
Financial subsidies are another form of protectionism which limit free trade as governments inject money into developing exporting industries and can therefore give them an advantage over other industries which may have the competitive advantage, reducing efficiencies.

Strategic approaches and laws to sustainability

- 1) Conserve, protect, restore and improve the supply and improve the supply and quality of natural resources and environmental media (energy, water, materials, ecosystem, land and air) over the long term.
- 2) Align and integrate programs, tools, incentives, and indicators to achieve as many positive outcomes as possible in environmental, economic and social systems.
- 3) Consider the full life cycles of multiple natural resources, processes, and pollutants in order to prevent pollution, reduce waste and create a sustainable future.

New international institutional contexts (2)

Feb 2016, Geneva, Switzerland. The adoption of the sustainable development goals (SDGs) represents an unprecedented moment in history of mankind for global governance and the protection of human rights (individuals) and our planet (the environment). The international legal system plays a pivotal role in defining and regulating the governance context in which the new 2030 development agenda and SDGs will operate.

International legal frameworks and competent institutions and civil societies serve as instruments to strengthen the three inter-linked pillars of sustainability (social, economic and environmental). Policy-makers, experts and advocates are being faced with the challenge of developing and implementing effective solutions to counteract climate change, unsustainable practices and protect the environment under a human rights approach.

For 2016, UNITAR's [United Nations Institute for ⁽²¹⁾ Training and Research] International Law portfolio has therefore revamped itself under the motto of international law for sustainable development, or in more simple terms, LAW4DEV. Law4Dev portfolio covers the areas of environmental democracy and the Rio Principle 10, international environmental law, human rights, humanitarian law, economic law and water law.

Commission on Sustainable Development

The United Nations Commission on Sustainable Development (CSD) was established by the UN General Assembly in December 1992 to ensure effective follow-up of United Nations Conference on Environment and Development (UNCED), also known as Earth Summit. From its inception, the CSD was highly participatory in structure and outlook by engaging in its formal proceedings a wide range of official stakeholders and partners through innovative formulae.

At its eleventh session in 2003, the commission⁽²¹⁾ decided on a multi-year work programme consisting of review and policy years. Since its establishment in 1992, the Commission has greatly advanced the sustainable development agenda within the international community.

At the United Nations Conference on Sustainable Development (Rio+20) member states agreed to establish a high level political forum that will subsequently replace the Commission on Sustainable Development.

Environmental ethics and laws

Environmental ethics is the part of environmental philosophy which considers extending the traditional boundaries of ethics from solely including humans to including the non-human world. It extends influence on a large range of disciplines including environmental law, environmental sociology, ecotology, ecological economics, ecology and environmental geography.

There are many ethical decisions that human⁽²³⁾ beings make with respect to the environment. For example:

- Should humans continue to clear cut forests for the sake of human consumption?
- Why should humans continue to propagate its species and life itself?
- Should humans continue to make gasoline-powered vehicles?
- What environmental obligations do humans need to keep for future generations?
- Is it right for humans to knowingly cause the extinction of a species for the convenience of humanity?
- How should humans best use and conserve the space environment to secure and expand life?
- What role can planetary boundaries play in reshaping the human-earth relationship?

India's move towards sustainable (24)
development

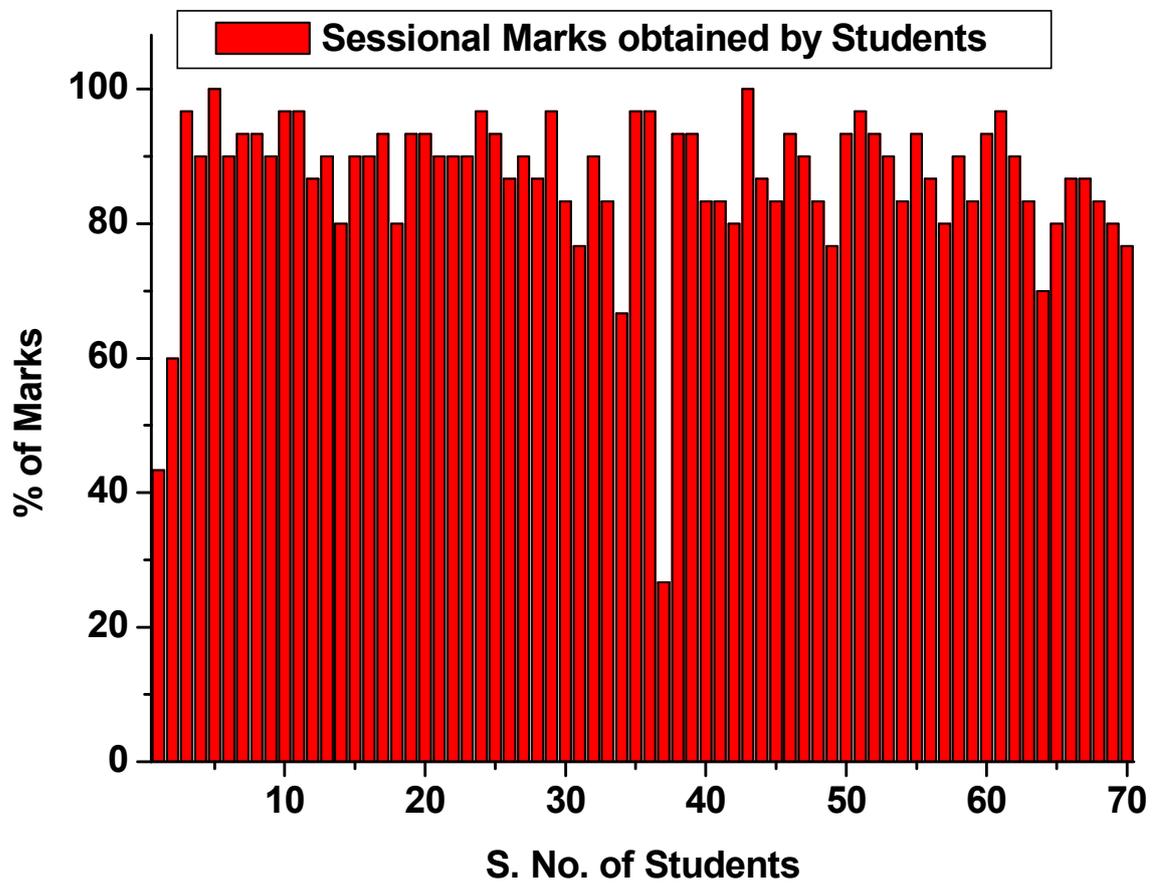
Refer to section Evaluation of S.D.
In this check the report mailed to
you during this class.

Results

S. No	Roll No.	Name	Marks
1	13M44	RAHUL KUMAR	13
2	13M52	KUMAR CHANDRA DEV	18
3	14M34	JAI HIND KUMAR	29
4	14M01	PRANESH KUMAR SINGH	27
5	14M02	SHEETAL RANJAN SAH	30
6	14M03	ADIL FAZAL	27
7	14M04	PREETAM KUMAR	28
8	14M05	AMRITANSH ANAND	28
9	14M07	PRANAV KUMAR	27
10	14M08	NADEEM ANSARI	29
11	14M09	SATISH ANAND	29
12	14M11	SUBIR KUMAR	26
13	14M12	SUMIT SAURAV	27
14	14M13	AMIT KUMAR	24
15	14M14	SHARAD BHASKAR	27
16	14M15	GAUTAM KUNAL BHARTI	27
17	14M16	MANJEET KUMAR	28
18	14M17	RAKESH KUMAR	24
19	14M18	HRISHIKESH JHA	28
20	14M19	ROHIT KUMAR	28
21	14M23	GAURAV KUMAR	27
22	14M24	SONU KUMAR	27
23	14M25	TRISHANT KUMAR	27
24	14M27	HARI KANT UPADHYAY	29
25	14M28	NIKHIL ARK	28
26	14M29	NIKHIL KUMAR	26
27	14M30	SUBHANSHU MISHRA	27
28	14M31	SHUBHAM PANDEY	26
29	14M32	PANKAJ KUMAR	29
30	14M33	SUDHANSHU SAURAV	25
31	14M35	PANKAJ KUMAR	23
32	14M36	SHUBHAM VERMA	27
33	14M37	PINTU KUMAR	25
34	14M38	SURAJ KUMAR	20
35	14M39	AASHNA RAJ	29
36	14M40	MD IRSHAD	29
37	14M41	MANISH KUMAR JHA	08
38	14M43	RAJESH RANJAN	28
39	14M46	SANJEET KUMAR	28
40	14M47	SAURABH PANDEY	25
41	14M48	SANJEEV KUMAR	25

42	14M50	RAHUL KUMAR	24
43	14M06	SHIVANI RAJ	30
44	14M10	KIRTY RATAN	26
45	14M20	RAMA SHANKAR RAVI	25
46	14M26	MD IMBESAT ANSARI	28
47	14M21	MANISH KUMAR	27
48	14M44	ABHISHEK KUMAR	25
49	14M45	PARAS KUMAR DEO	23
50	14M49	MODASSIR SABA NAJMI	28
51	14M52	AYUSH PRIYAM	29
52	14M53	MAYANK	28
53	14M56	ABHIJEET	27
54	14M57	RAMESH KUMAR	25
55	14M58	SAGEER KUMAR SANU	28
56	14M59	ASAF MOHAMMAD KHAN	26
57	14M60	PUNYANIDHI	24
58	14M62	AMISH RAJ	27
59	14M54	VISHAL KUMAR	25
60	15(LE)M12	DIPAK KUMAR PASWAN	28
61	15(LE)M11	ANKITA KUMARI	29
62	15(LE)M01	SOURAV BHARTI	27
63	15(LE)M03	AFROJ ALAM	25
64	15(LE)M08	RAJBIRENDRA RAVIDAS	21
65	15(LE)M09	AKHILESH KUMAR	24
66	15(LE)M02	VISHAL KUMAR	26
67	15(LE)M07	JIMMY KUMAR	26
68	15(LE)M06	SANDEEP KUMAR	25
69	14M61	RITESH KUMAR	24
70	15(LE)M10	RAJU RANJAN	23

Result Analysis



Quality Measurement Sheets

Feedback from students

Sir you are teaching good and
your explaining capacity is good
but some times your explaining
speed becomes too high so we
can't understand. Sir some times
you should have to give some assignments
to do at home + after preparing
I have to perform in class so
that student can get some confidence
not directly but in steady already you have improve situation skills.

• Improve our confidence on Speaking in any Seminar or Presentation.

• Good bonding b/w Student & Prof. (Teacher)

• ভালো লাগে, তাহলে আমরা কবাব
English কে কমা রলি.

ওই বা—কবেক খন কালজ করা ভাল
লাগে না

Parashramu Sir is the most preferred faculty in the Mechanical Department. He is highly knowledgeable and interacts easily with the students.

And the most important, he knows the need of his students and deal accordingly. So this is all about him.

Sir, every sentence you speak is very sound and graspable to us. you explain the subjects terms through our daily life examples, that is very incredible. Sir, I'm not able to write any point that can indicate any improvement towards your teaching style, ~~it's~~ it's gratitude that you're improving us.

Sir, every sentence you speak is very sound and graspable to us. you explain the subjects terms through our daily life examples, that is very incredible. Sir, I'm not able to write any point that can indicate any improvement towards your teaching style, ~~it's~~ it's gratitude that you're improving us.

Respected Sir,

→ First time including all the 8th semester. I have attending classes I found it bit tardy but, it will surely boost my marks in exam.

→ There is fault in subject, which makes it less interesting not in your way of teaching.

Although being a non technical paper, the subject is less interesting. But sir is teaching it in a very interactive manner, so I like the way sir is teaching.

Set Propositions

Prabhanthu sir is a best lecturer at our college. Their teaching style is very attractive and I would understand in a correct manner. I have never missed Prabhanthu sir's class. He is a star lecturer. Their view for all students is equal. They are very careful for us. I like so much Prabhanthu sir.

We feel good to be taught from
such a knowledgeable teacher. The
only thing in my mind that is not
satisfactory is long class
duration. It should be relatively
less time.

You are a good teacher that is because your teaching speaking way is very good and understanding. The most favourite thing is that I really found on you that you speak very politely and encourage each and every student for presenting their thoughts and ideas. Your teaching way is excellent that you give note and not taught each points with examples. One more thing that I observed in last class that you listen carefully all the points of e-collaboration and also discussed key points that I said and also that we have to improve. Thanku Sir.

PRABHANSHU SIR

★★★★★ (5/5)

The mode of teaching of yours is the best. You teach everything practically. The class never goes boring. Although it is a boring subject but the way you teach it makes it very interesting. The way of yours, taking quizzes, holding debates on certain topics, is what which makes the class even more interesting. You teach every point in a very simple manner.

Sir, Your teaching skill is quite good. You are punctual in your daily classes. Whatever you teach, it is quite easy to grasp. We are fully satisfied with your way of teaching. Each and every word that comes out of your mouth has gets embedded in our mind. Its quite difficult to forget the way you teach. We are ~~in dept~~ highly indebted that we have got a great teacher in form of you.

Sir your teaching
skill is so impressive
we are satisfied
with your subject
study and also
the presentation
course but may you
choose the topic
that is quite familiar
for us and useful
for another exam
and interview.

you got

✶ ✶ ✶ ✶

Respected Sir,

you teach us from
your bottom of heart. You dedicat-
ed about students and your
pedagogy is very nice.

In terms of star:-



- Pros:-
- (i) Good interaction with the whole class
 - (ii) Explanation of concepts using practical and real life examples
 - (iii) Good content and teaching skills
 - (iv) Maintenance of levels of teaching as per engineering standards.

- Cons:-
- (i) During presentations, more guidance is required by the students
 - (ii) Regarding project, more explanation of the job of students and role of teacher is needed
 - (iii) More appropriate handling of class chaos is needed.

②

Respected Sir,

Till now, we didn't study any management topic with such an interest which we came to ~~the~~ study in your class. We came to ~~to~~ know the ^{correct} approach of studying MIS. This is the best thing which I liked about your teaching.

Thanks Sir.

Positive points:

- i) Interaction with students in class
- ii) Having discussion with students in class
- iii) Using technological methods of teaching like projectors, etc
- iv) You involve students in various discussions, task, assignment etc
- v) Assist the students with their project work regularly via email, and other classwork

Improvement:

- Increase your fluency in English little more, and you are good.

• Your teaching method is good especially yesterday when you made the whole class participate by dividing them into two groups.

• What I would suggest is that you should often make the whole class indulge in some type of group activity & then make your points through that what you want to teach, because the subject you teach is boring.

first, you have made even
the boring subjects interesting.

The way to explain the topics,
and the examples, you take to make
your topic accessible to students, really
good and interesting.

"Best way" - your teaching ways and you
also provide the notes available on
students e-mail account.

RESPECTED SIR

MERITS.

5/5 Star

1. Sincere.
2. Honest.
3. Gives his maxm Effort
4. Motivates.
5. Overall Good.

DEMERITS

1. Not found yet.

SUGGESTION

जिस Teacher का जो Field/Interest
है उसको वही subject देना चाहिए।

Else, Teacher का भी Time
waste होगा है & students का भी।

Interdisciplinary subjects
से इतना seriously class नहीं लेना चाहिए।

Subjects → sustainable development & MFS.
Sir, your way of teaching is quite influential,
you tried a better approach and your
examples related to the topics are
quite easy and easily we can
visualise it. The experience is quite
satisfactory, motivating and interesting to me.
Sir, you tried to create better skills and
competitive environment between our batchmates that's
much appreciated. Suggestion → Plan a plant
visit for all of us Sir.

Sis, you are teaching
very nice. you tried
to built up soft-skill
in each student. This
is really need among
us (soft-skill). I think
you need to give more
focus on soft-skill and
student should also
support.

~~keep~~
Although way of teaching
is very good and
contacting by e-mail
is also good way.

feed back.

- Sir, try to teach right and create a good environment in the class. So that student hears sincerely, but some student like me don't interested to hear lecture then what will you do.

Prabhakar sir, you are the best
faculty in M.I.T Mursharapur because
when I study in your class I
feel better understanding in your
subject. I gain good knowledge
of your subjects with your help.
All concepts of teaching style is
good.

So, I can say that I are
the best faculty in M.I.T Mursharapur.

Sir you teach very good and I ~~understand~~
very understand your teaching method
and process. There is no issue of
your teaching process.
my communication skill is also developed
and also ^{my} confident is increases.
~~The~~

Managerial Information system

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Haven't attended much of MIS class, but the best thing of the class led by sir is the chance or situation of communication that is created for discussion on subject topics. That is one thing I have liked the most. It is really a confidence booster.

Suggestion → classes can be made a bit more engaging.