2a) Define Servlet.

→ Servlet is a web technology which is used to developed web application.

→ Servlet is a server-site web component which recieves the request, from the brower, procees the request and send the response to the web-browser.
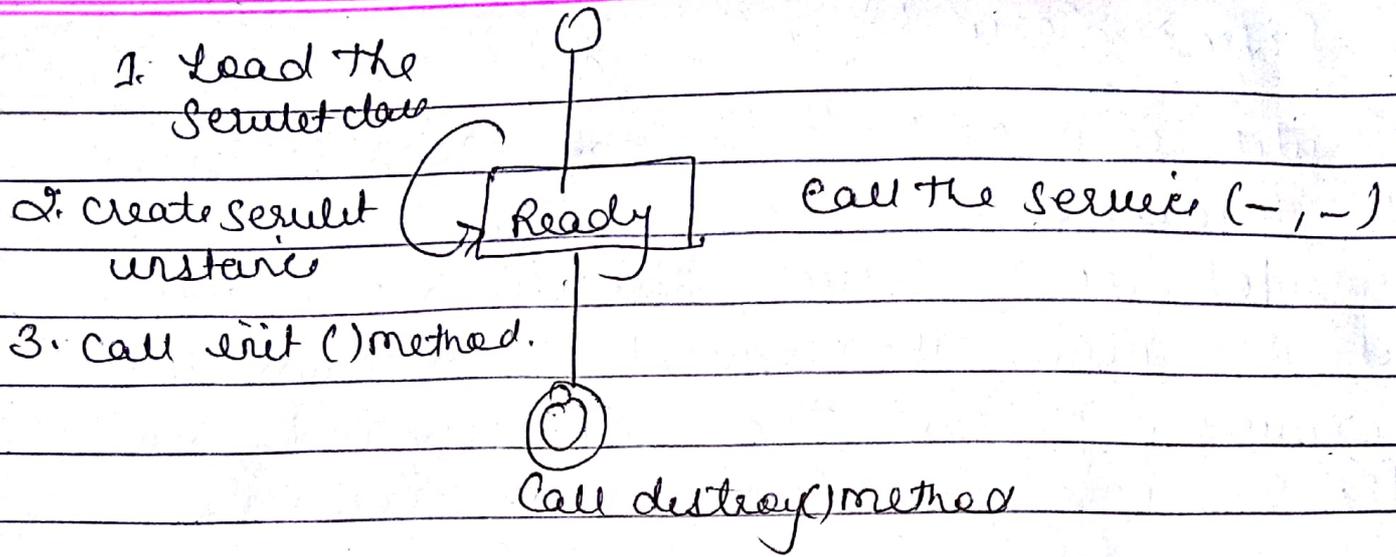
b) Explain implicit object in Jsp.

There are 9 implicit object in Jsp which is created by web container.

	Object	Type
(i)	Out	Jsp writer
(ii)	Request	HttpServletRequest
(iii)	Response	Http Servlet Response.
(IV)	Config	Servlet config
(V)	Application	Servlet Context
(VI)	Page	Object
(VII)	Page context	Page context
(VIII)	Exception	Throwable
(IX)	session	Http seuces

c) Explain Servlet lifecycle.

At first start the servlet, web container will be started, do the following task.

1. Load the Serulet class

2. Create serulet instance

3. Call init() method.

Ready

Call the service (~, ~)

Call destroy() method

a) Serulet class is loaded
b) Serulet instance is created.
c) That method is invoked.
d) Service method is invoked.
e) destroy method is invoked.

3 a) Define page directive? with example.
Page directive define attribute that apply to an entire jsp page.

Syntax: <% @page attribute = "value" %>

Attribute of jsp page directive
a) i) import
ii) extends
iii) Session
iv) language
v) is Thread Safe

vi) Error page

vii) is Error page.

b) Differentiate servlet and jsp.

Servlet	JSP.
→ Servlet is html in java	→ Jsp is java in html.
→ Servlet life cycle method: init() service() destroy()	→ Jsp life cycle method: jsp init() jsp service() jsp destroy()
→ Servlet act as Controller	→ Jsp acts as a viewer.

c) Explain jsp life cycle.

(i) Translating jsp to servlet (hello.java → hello JSP java)

(ii) Load the translated servlet (hello_jsp.java → hello_jsp.class).

(iii) Load the translated servlet.

(iv) Create the instance of translated servlet.

(v) Call the lifecycle method - jsp init() when user send the request than container call life cycle method - jsp service().

(vi) At the container shutdown time, container

Call life cycle method — Jspdestroy().

4 a) Explain Scripting element.
The scripting element provides the ability to insert java code inside the jsp. There are three type of scripting element.

1) Scriplet tag :
Syntax :   < %
           ___ ___
           ___ ___
               % >

(ii) Expression tag.
   Syntax :   < %.= expre % >

(iii) Declaration tag
   syntax :   < %!
              ___ ___
              ___ ___
                  % >

b) Sample source code structure of a servlet example which recieve the request from browser, process the request and send the response to browser.

Files Required

(I) Login. html

(II) Login. Servlet (java

(III) web. XML.

(i) Login. html .

```html
<html>
<head>
<title> Nuz </title>
</head>
<body bgcolor = "green">
<center> <br> <br>
<h1> Account login </h1>
<form action = "login. nut">
<table>
<tr>
<td> username </td>
</td>
<tr>
<tr>
<td> password </td>
</tr>
</table>
</center>
</body>
</html>
```

① Login - Servlet. java,

.Package com.net - Servlet;

import java.io.*;

Class Login Servlet extends HttpServlet

{

  public void Service (HttpServletRequest req,
                HttpServlet Response res)

  1. Collect the data

    String un = req.get parameter ("unane");
    String pw = req.get parameter ("poad");

  2. process.

    if (un.equals (Pw))

    {

       msg = "Login Successful",

    }

    else

       Msg = "Login faled ";

  3. Send the resporee

    Printwriter out = res.getwriter ()

    out.println ("Kh> NIT ₹/h)");

}

}

}

(11) web.xml

```
<web-app>
<servlet>
  <servlet-name> Login servlet </servlet-name>
</servlet>
  <servlet mapping>
  <servlet name> Login servlet </servlet-name>
</servlet mapping>
</web-app>
```

c) Define Include directive & with example.
  Include directive is used to include 1
  JSP to another jsp or html.

Example.
  `<%@ include file ="/header.jsp" %>`

5 a) Define web-based application.
In web based application, application software
will be installed on server machine only.
I.e multiple client can access the centralised
web server using any web browser.
  web-based application can be implemented
using spring, struts, jsp, servlet etc.

b) Differentiate between Include derective and Include action

Include derective	Include Action
(i) The attribute of include derective is file.	(i) The attribute of include action is page.
Ex:- <%@ Include file = "header.JSP" />	Ex:- <Jsp: include page = "header.jsp">

c) Explain type of parameter in servlet.
There are three type of parameter in Servlet.

i) Servlet request parameter
ii) Servlet Conflict parameter
iii) Servlet Context parameter.

1 a) doGet, doPost, doPut, do Delete..
  b) request.getparameter ().
  c) Get, Head, Put and Delete.
  d) Servlet Context.
  e) JBash, Glassfish, weblogic, websphere
  f) Forward() method