Name:	
Enrolment No:	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Supplementary Examination, May2022

Course: Object Oriented Programming **Semester: IV**
Program: B.Tech CSE + Big Data, DevOps **Time : 03 hrs.**
Course Code: CSEG 2016 **Max. Marks: 100**

Instructions: All Questions are compulsory, Internal choice available wherever applicable.

SECTION A

S. No.		Marks	CO
Q 1	Provide your explanation on keeping a constructor private	**4**	**CO1**
Q 2	Define auto boxing and unboxing in java. Also give the difference between primitive data type and wrapper classes? Is the use of primitive data type in java violation of object orientated rules?	**4**	**CO1**
Q 3	Differentiate between overloading and overridden method and explain covariant return type.	**4**	**CO2**
Q 4	Enlist and elaborate all features of Java language supporting OOPs.	**4**	**CO1**
Q 5	Write a program in Java to store the marks of 10 students. Define your own exception .Make use of your exception if entered marks are less than 0 or greater than 100	**4**	**CO3**

SECTION B

Q 6	Illustrate the significance of deployment descriptor for a web application. Give a brief description of 4 tags used in deployment descriptor, with relevant example.	**10**	**CO4**

Q 7	Enlist access modifiers and define the usage of access modifiers in java inside and outside package.
	
	`package com.one;`
	`class A`
	`{`
	` public void methOne(){}`
	` void methTwo(){}`
	` protected void methThree(){}`
	` private void methFour(){}`
	`}`
	Create a new Class B in package com.two and try to access methods of class A inside class B. Justify the findings.
		10	**CO2**

Q 8	Look at the following code carefully and you will notice 10 places are underlined. Explain purpose and kind of each in detail. Be as much detailed as possible and write point wise. package com.upes; class SuppSem{	**10**	**CO1**

	``java
	public static void main(String args[])
	{
	
	SuppSem obj=new SuppSem();
	
	System.out.println("Hello World");
	
	}
	
	}
	``		

Q 9	Explain Deep Cloning and Shallow cloning with the help of a program. **OR** Write a program in Java to store the marks of 10 students. Define your own exception. Make use of your exception if entered marks are less than 0 or greater than 100	**10**	**CO3**
SECTION-C			

Q 10	Answer the following:
	
	  a) Differentiate between JSP and Servlets.
	  b) Session Management in Servlets.
	  c) Cookie Management in Servlets
	  d) What are context and config objects in Servlets.
		20	**CO4**

Q 11	Explain with code snippets.
	  (a) Write a Java program to create two threads using Runnable Interface. Assign both threads different task to perform. Also, synchronize the execution of the threads such that second will start its execution after first finishes using inter-thread communication.
	  (b) Complete hierarchy of Collection interface in Java.
	
	OR
	
	Explain with reason:
	
	  a) HttpServlet are preferred over GenericServlet.
	  b) Need of updatable resultset.
	  c) PreparedStatement is better than Statement.
	  d) ODBC Bridge is not used in practical development.
		20	**CO5**