

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, April/May 2018**

**Course: B.Tech CSE All IBM Branches**  
**Semester:IV**  
**Program: Advance Programming using Java**  
**Time: 03 hrs.**

**Max. Marks: 100**

**Instructions: Attempt all questions.**

**SECTION A**

S. No.		Marks	CO
Q.1	Create a class with one Integer instance variable. Initialize the variable using: a) Default Constructor    b) Parametrized Constructor	2+3	CO1
Q.2	Why multiple inheritance is not supported in Java through the concept of classes? How can we implement multiple inheritance in java? Explain with the help of a suitable program.	2+3	CO2
Q.3	Define Package in java. How to access package from another package. Explain any one with example.	2+3	CO3,C O4
Q.4	Can a Java program contain more than one "main" method in a class? Explain with example.	1+4	CO3, CO4

**SECTION B**

Q.5	(a) What are the differences between throw and throws? Explain it with example. (b) What are the differences between final, finally, and finalize in java? Explain the logic with example.	5+5	CO2, CO3,C O4
Q.6	(a) Why wait(), notify() and notifyAll() methods have to be called from synchronized method or block? Explain it with example. (b) How can we make sure main() is the last thread to finish in Java Program? Explain the logic with example.	5+5	CO2,C O3, CO4
Q.7	(a) Explain Wrapper Class. Write down the hierarchy of Wrapper class. (b) Explain the collection framework with suitable examples.	6+4	CO3, CO4
OR			
Q.7	Explain the following methods with example: (a) String charAt( ) (b) String compareTo( ) (c) String IgnoreCase( )	2+2+2 +2+2	CO3, CO4

	(d) String isEmpty() (e) String getChars()		
Q.8	(a) Write an interface called Test which has one method that calculates the square of an integer. (b) Write a program in java that accept two two-dimensional array and perform the matrix multiplication.	4+6	CO3, CO4
<b>SECTION-C</b>			
Q.9	(a) What is the difference between Type-1 and Type-4 Driver in JDBC. (b) Write JDBC code for the following scenario: “I want to develop a J2EE project that will ask to enter any 10 numbers using a console. The 10 numbers will be taken by console separated by comma. The java code will get these numbers from console and fill them in an array. After filling the array the array elements will be checked one by one. If the element is EVEN then it should be inserted into EVEN table and ODD number should be inserted into ODD table of MYSQL Database. EVEN and ODD are two separate tables in MYSQL Database”.	4+16	CO1,C O2,CO 4,CO5
Q.10	Write the HTML and Java Servlet code for the following two Web Pages:  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="border: 1px solid black; padding: 10px; width: 45%;"> <p style="text-align: center;">NAME <input style="width: 100%;" type="text"/></p> <p>BASIC SALARY <input style="width: 100%;" type="text"/></p> <p style="text-align: center;"><input style="width: 100%; background-color: #cccccc;" type="button" value="GROSS"/></p> </div> <div style="border: 1px solid black; padding: 10px; width: 45%;"> <p style="text-align: center;">GROSS SAL SHEET</p> <p>Hello Name Your Gross Sal is Gross Salary</p> </div> </div> <p style="text-align: center; margin-top: 10px;">basic.html <span style="margin-left: 200px;">Gross.html</span></p> <p>The HTML page will take name and Basic Salary as input and Servlet code will calculate Gross Salary and display on another web page. The calculation for Gross Salary is as per the following formula. Gross Salary = Basic + HRA+DA Where, HRA = 20% of Basic, DA = 90% of Basic.</p>	20	CO1,C O3, CO5
OR			
Q.10	(a) Write any four advantages of JSP over servlets. (b) Draw and explain the lifecycle of a JSP page. (c) Differentiate between JSP Sriptlet & JSP Expression tag. Give example.	4+8+8	CO3,C O4, CO5