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Code No. : 15157 (B) N

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. V-Semester Main Examinations, Jan./Feb.-2024**Fundamentals of Object Oriented Programming (OE-III)**

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B****Part-A (10 × 2 = 20 Marks)**

Q. No.	Stem of the question	M	L	CO	PO
1.	Write single line definitions for four properties of Object-oriented Programming.	2	1	1	1
2.	Write a program to display the numbers that are even and also divisible by 4 in the range 21 to 40	2	2	1	1
3.	Write the output, by modifying highlighted code snippet to display actual values instead of printing default values using 'this' keyword. <pre>class Student{ static String collg = "VCE"; int rollno; String name; float fee; Student(int rollno,String name,float fee){ rollno=rollno; name=name; fee=fee; } void display(){ System.out.println(rollno+" "+name+" "+fee);} } class TestThis1{ public static void main(String args[]){ Student s1=new Student(111,"ankit",5000f); s1.display(); //statement to print the static variable data } }</pre>	2	2	2	1
4.	List the different valid ways to import a public class "PackImp" from package "pack".	2	1	2	1
5.	Write a program to handle the ArithmeticException when trying to divide a number by zero, using the try-catch-finally blocks.	2	2	3	1

Contd... 2

6.	<p>There are 4 threads given below priorities. If they are waiting for execution then what can be the order of getting a chance to execute?</p> <p>Thread Priority</p> <p>t1 8</p> <p>t2 6</p> <p>t3 7</p> <p>t4 4</p>	2	2	3	1
7.	<p>Write a program to create a file, and check the below properties of the file object:</p> <ul style="list-style-type: none"> • get the file name • get the absolute path • can write data to the file • size of the file in bytes 	2	2	4	1
8.	<p>When we get the usernames for the user in their profiles, some may enter in uppercase, some in lowercase, and some in mixed cases. Now we don't want that, we want uniformity in the usernames if we are going to present a legible report. Write a program that converts all the letters of the username into uppercase.</p> <p>Input: VaSavi</p> <p>Output: VASAVI</p>	2	2	4	1
9.	<p>Write a code snippet to set the layout for the components created on a applet window.</p>	2	2	5	1
10.	<p>Match the following actions (i, ii, iii & iv) to the type of Event (a, b, c & d)</p> <p>i) Button click a) ItemEvent</p> <p>ii) Frame closing b) MouseEvent</p> <p>iii) Choice selection c) Window Event</p> <p>iv) Mouse click d) ActionEvent</p>	2	1	5	1
Part-B (5 × 8 = 40 Marks)					
11. a)	<p>Create an Employee class with Emp_ID, name and rating as the attributes. Accept the details of 5 employee objects (use array of objects). Write a Java program which sorts the employee objects in ascending order based on the employee ID.</p>	5	2	1	1, 2, 3
b)	<p>List and explain the features of Java.</p>	3	1	1	1
12. a)	<p>Create a package "sem" having base class OsmaniaUniversity with the basic details as attributes to be followed by affiliated colleges and display(). A subclass VCE has to be created by importing the class from created package, and with collegeName as final variable, display the base class details by overriding the display() method of super class and by using "super" keyword and make the VCE subclass as final. Also justify what happens by making a variable and class as final.</p>	4	3	2	1, 2, 3

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<p>b)</p> <p>17.</p> <p>a)</p> <p>b)</p> <p>c)</p>	<p>Given an Abstract class called CSE_VCE which has abstract method like eligibleIntern() and concrete method as displayDetails(). Create an appropriate subclass to override the abstract method and display the relevant message wrt given input data using the concept of dynamic method dispatch.</p> <p>Answer any <i>two</i> of the following:</p> <p>Write a java program to implement the producer-consumer a multi-process synchronization problem having the producer thread and the consumer thread, which share a common, fixed-size buffer. The producer's job is to generate data, put it into the buffer, and start again. At the same time, the consumer is consuming the data one piece at a time. Write the code to make sure that the producer won't try to add data into the buffer if it's full and that the consumer won't try to remove data from an empty buffer.</p> <p>Write a java program by making use of BufferedReader class to read a text file "demo.txt" and displays its content on the console. Also use the suitable class to write the data "Welcome to VCE" into a file "semester.txt". Also handle the appropriate exception if the file not exists while read operation.</p> <p>Write a java applet which takes two numbers as parameters passed via a html file and displays the greatest number between as output on the applet.</p>	<p>4 3 2 1, 2, 3</p> <p>4 3 3 1, 2, 3, 12</p> <p>4 3 4 1, 2, 3</p> <p>4 2 5 1, 2</p>
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M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	39%
iii)	Blooms Taxonomy Level – 3 & 4	41%
