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Code No. : 13666 N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. (I.T.) III-Semester Main & Backlog Examinations, Jan./Feb.-2024**Object Oriented Programming**

Time: 3 hours

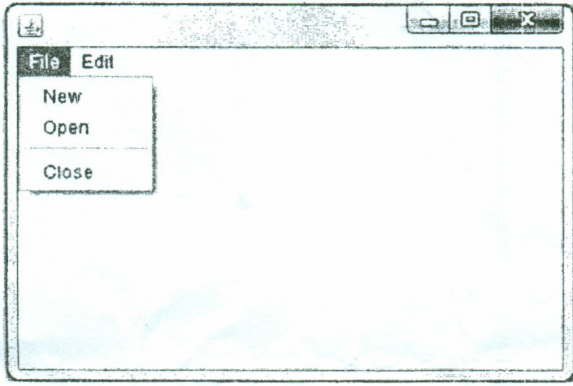
Max. Marks: 60

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.	Mention the use of 'this' keyword in Java, using a suitable example.	2	1	1	1
2.	Write the output for the following code? <pre>class A { final void meth() { System.out.println("This is a final method."); } } class B extends A { void meth() { System.out.println("This is a meth method"); } }</pre>	2	2	1	1
3.	Write the output of the following code? <pre>public class MyTest { public static void main(String args[]) { try { System.out.print("A"); int num = 99/0; System.out.print("B"); } System.out.print("C"); catch(ArithmeticException ex) { System.out.print("D"); } } }</pre>	2	2	2	1

Contd... 2

4.	Write the name of the thread declared with the following code “ Thread t=Thread.currentThread() ”.	2	1	2	1
5.	List any two classes and interfaces present in java.io package.	2	1	3	1
6.	Identify a scenario where you would recommend the use of StringBuffer class over String class, and justify this with an example.	2	1	3	1
7.	Demonstrate with an example how type safety can be enforced on a class using Generics.	2	2	4	1
8.	Using Collections framework, write a block of code to search for your name from a list of student names.	2	3	4	2
9.	Assuming that an applet class is written in a source file named "HelloApplet.java" and the class is a public class, the applet is embedded inside an html file named "greet.html", specify command for running the applet.	2	1	5	1
10.	Write is the purpose of using ActionListener interface in Swing.	2	1	5	1
Part-B (5 × 8 = 40 Marks)					
11. a)	Compare an abstract class with an interface, using an example.	3	2	1	1
b)	Create a class called Book in the package vce.library , to represent a book. A Book should include four pieces of information as instance variables-book name, ISBN number, author name and publisher. Your class should have a constructor that initializes the four instance variables. Provide a mutator method and accessor method for each instance variable. In addition, provide a method named getBookInfo that returns the description of the book as a String (the description should include all the information about the book). You should use this keyword in member methods and constructor. Write a test application named BookTest in the package vce.test to create an array of object for 30 elements for class Book to demonstrate the class Book's capabilities.	5	4	1	2
12. a)	Distinguish between checked and unchecked exceptions. Also provide examples for each.	3	2	2	1
b)	Develop a program that creates 3 threads by extending Thread class. First thread displays “Good Morning” every 1 sec, the second thread displays “Hello” every 2 seconds and the third displays “Welcome” every 3 seconds.	5	3	2	2
13. a)	Write a program to read two txt files ‘demo1.txt’ and demo2.txt’ and merge the contents of these 2 files into a new file named ‘demo.txt’.	4	3	3	2
b)	Write a program to find the number of words in a given string using StringTokenizer class.	4	3	3	2
14. a)	List any four different ways to iterate over a list of elements along with their syntax and an example for each.	3	2	4	1

	b) Develop an online shopping cart program using a HashMap to store items and their prices. Allow users to add items to the cart, remove items, and calculate the total price.	5	3	4	2
15. a)	Explain the different steps in Delegation event model of handling events with the help of an example.	3	2	5	1
	b) Create an AWT application to develop sample Notepad GUI as shown in the figure below.	5	3	5	2
					
16. a)	What is a static data member? Illustrate the important characteristics of a static member variable, using examples.	4	1	1	1
	<p>b) Write a Java class named Person having three attributes namely 'name', 'age' and 'gender'.</p> <p>Create instances of Person class by taking input from user. The program must handle the following exceptions.</p> <p>i) If values of attributes not provided by user.</p> <p>ii) If the value of age is not an integer.</p> <p>iii) If the value of name is not a String.</p>	4	3	2	2
17.	Answer any <i>two</i> of the following:				
	a) State the purpose of using wrapper classes. Explain any two wrapper classes with examples.	4	2	3	1
	b) Compare TreeSet and TreeMap with suitable example.	4	2	4	1
	c) Compare and contrast Applet and Swing.	4	2	5	1

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	40%
iii)	Blooms Taxonomy Level – 3 & 4	40%
