Total No. of Printed Pages: 2

PRN No.	

PAPER CODE	V124-353

May 2024 (ENDSEM) EXAM

F.Y.B. TECH. (SEMESTER - II)

COURSE NAME:PROBLEM SOLVING AND PROGRAMMING II **Branch: COMPUTER SCIENCE AND ENGINEERING (AIML)** **COURSE CODE: CM12233**

(PATTERN 2023)

Time: [1Hr. 30 Min] **[Max. Marks: 40]**

() Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data wherever required**
4) **All questions are compulsory. Solve any one sub question from each Question 1 and 2 and any three sub questions each from Questions 3 and 4.**

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a)Java has different types for constructor, illustrate different types with pseudo code for each.	[5]	1	2
	b) What is the usage of enumerated data type? Give examples.	[5]	1	2
Q2	a) What are the common problems that may arise due to inefficient garbage collection? What does finalize() do?	[5]	2	3
	b) Discuss the syntax for declaring abstract classes and methods in Java, including rules and restrictions.	5]	2	3
Q.3	a) How does the interface handle inheritance and polymorphism? Justify your answer with example.	[5]	3	3
	b) Explain the difference between compile-time polymorphism and run-time polymorphism in Java. Provide examples for each type and discuss their respective advantages in program design.	[5]	3	3
	c) Design an interface called Shape with methods draw() and getArea(). Further design two classes called Circle and Rectangle that implements Shape to compute area of respective shapes. Use appropriate getter and setter methods. Write a java program for the same.	[5]	3	3
	d) Illustrate with an example ~~polymorphism in java~~. Abstraction in java	[5]	3	3

Q.4	a) Identify and describe three types of inheritance supported in Java. For each type, provide a brief explanation and an example illustrating its usage in a real-world scenario.	[5]	3	3
	b) Explain the difference between ~~compile-time polymorphism~~ and run-time polymorphism in Java. Provide examples for each type and discuss their respective advantages in program design. association & aggression.	[5]	3	3
	c) Can we define an interface with a static modifier? Justify your answer with example.	[5]	3	3
	d) Illustrate with an example ~~polymorphism~~ ~~multiple inheritance~~ encapsulation in java.	[5]	3	3

1. Remembering 2. Understading 3. Applying 4. Analyzing 5. Evaluating 6. Creating

**********Best of Luck **********

Changed
OSkwit
16/05/2024.