VR23 Reg. No: | | | | | | | | | | |

VELAGAPUDI RAMAKRISHNA

SIDDHARTHA ENGINEERING COLLEGE

(AUTONOMOUS)

II/IV B.Tech. DEGREE EXAMINATION, DECEMBER - 2024

Third Semester

AI&DS

23AI&DS3307 OBJECT ORIENTED PROGRAMMING THROUGH JAVA

Time: 3 hours ***Max. Marks: 70***

Part-A is compulsory

Answer One Question from each Unit of Part - B

Answer to any single question or its part shall be written at one place only

PART-A

5 x 2 = 10M

1.	a.	Compare default access modifier with public in Java.	**(CO1 K2)**
	b.	Why Java is Strictly type checking language?	**(CO2 K2)**
	c.	List any four Unchecked Exceptions .	**(CO2 K1)**
	d.	Write is the use of collections?	**(CO3 K2)**
	e.	List any two applications of Super Keyword.	**(CO4 K1)**

PART-B

4 x 15 = 60M

UNIT-I

2. a. Explain the basic structure of Java Program with example. **(CO1 K2) 7M**
   b. Write a Java program to demonstrate the use of Method Overloading. **(CO1 K3) 8M**

(or)

3. a. What is constructor and explain different types of Constructors with example. **(CO1 K2) 8M**
   b. Explain the static keyword with example. **(CO1 K2) 7M**

UNIT-II

4. a. Write a program to demonstrate the difference in performance between String and StringBuffer. **(CO2 K3) 8M**
   b. Write a Java program that demonstrates dynamic method dispatch. **(CO2 K3) 7M**

(or)

5. a. Examine a Java program that uses both abstract classes and interfaces. **(CO2 K4) 8M**
   b. Explain the concept of access control in Java. **(CO2 K2) 7M**

UNIT-III

6. a. Write a Java program that demonstrates how to handle multiple exceptions using try-catch blocks. **(CO3 K3) 8M**
   b. Analyze the different methods available in the Scanner class for reading different types of data. **(CO3 K4) 7M**

(or)

7. a. Explain the concept of exception handling in Java. **(CO3 K2) 7M**
   b. Write a Java program that demonstrates how Array Index Out Of Bounds Exception can occur. **(CO3 K3) 8M**

UNIT-IV

8. a. Explain the concept of functional programming in Java. **(CO4 K2) 7M**
   b. Design a Java program that uses ArrayList to manage a collection of objects. **(CO4 K3) 8M**

(or)

9. a. Create a generic Linked List in Java that can handle any type of data. **(CO4 K3) 8M**
   b. Analyze the performance differences between HashMap, Linked HashMap, and TreeMap. **(CO4 K4) 7M**

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