

**SVKM'S NMIMS**

**MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING**

Academic Year: 2023-2024

Program: MCA

Year: I Semester: I

Stream: Computer Engineering

Subject: Java Programming

Date: 05 / 02 / 2024

Marks: 100

Time: 3 hrs (~~10.00am~~ to ~~1.00pm~~)

No. of Pages: 02

**Re-Examination (2022-23 / 2023-24)**

**Instructions:** Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

- 1) Question No. 1 is compulsory.
- 2) Out of remaining questions, attempt any 4 questions.
- 3) **In all 5 questions to be attempted.**
- 4) All questions carry equal marks.
- 5) **Answer to each new question to be started on a fresh page.**
- 6) **Figures in brackets on the right hand side indicate full marks.**
- 7) **Assume Suitable data if necessary.**
- 8) **Write output for all programming questions.**

Q1		Answer briefly:	[20]
CO-1 ; BL-4	a.	Discuss any 10 features of Java.	[5]
CO-3 ; BL-2	b.	Explain JDBC Drivers in detail.	[5]
CO-1 BL-4	c.	Justify why String objects are immutable? Also, explain any 4 String methods with their return types and parameters.	[5]
CO-2 ; BL-2	d.	Explain Set Interface and set operations in detail.	[5]
<b>Q2</b> CO-1; BL-2,6	a.	Explain Constructor Overloading in detail with types of Constructors. Write a Java Program to demonstrate Constructor Overloading.	[10]
CO-1; BL-6	b.	Write a Java program to display the following pattern by asking the user for number of lines. * * * * * * * * * * * * * * * *	[10]
<b>Q3</b> CO-1; BL-2	a.	Explain how throw keyword is used to handle user defined exceptions in Java with the help of a program.	[10]

CO-1; BL-6	b.	<p>Create a class named 'Staff' having the following members: Data members: Name, Age, Phone number, Address, Salary It also has a method named 'printSalary' which prints the salary of the staff and 'display' that displays all the data members value on screen.</p> <p>Two classes 'FullTime' and 'PartTime' inherits the 'Staff' class. The 'FullTime' and 'PartTime' classes have data members 'specialization' and 'department' respectively. Now, assign values for name, age, phone number, address and salary to a FullTime Staff and a PartTime Staff by making an object of both of these classes and print the same by invoking the method.</p>	[10]
<b>Q4</b> CO-1; BL-6,2	a.	<p>1. Implement a Java Program to find largest of three numbers accepted from the user using BufferedReader Class.</p> <p>2. Explain Checked and Unchecked Exceptions in detail.</p>	[10]
CO-3; BL-2	b.	Explain how events are processed in JavaFX. In order to handle the events, explain the steps required.	[10]
<b>Q5</b> CO-3; BL-2	a.	Explain JDBC Components. Discuss any six classes and interfaces of JDBC.	[10]
CO-2; BL-2	b.	<p>Explain the following with respect to Generics –</p> <p>1. Generic Restrictions</p> <p>2. Bounded Types with example code</p>	[10]
<b>Q6</b> CO-1; BL-6	a.	Write a program to print the id, name and total marks of 10 students in a college using array of objects.	[10]
CO-3; BL-2	b.	Discuss in detail Java FX Architecture.	[10]
<b>Q7</b> CO-1; BL-4	a.	Differentiate between final and finally in Java. Also, analyze the effect of using final keyword with a field member, a class and a method with appropriate codes.	[10]
CO-2; BL-2,6	b.	Write a note on List interface. Explain any 5 LinkedList methods	[10]