

JSS MAHAVIDYAPEETHA JSS ACADEMY OF TECHNICAL EDUCATION, NOIDA **DEPARTMENT OF Computer Science and Engineering**

CIA-I [Even Semester-(AY 2024-25)]

Course

: B.Tech

Date

: 02/05/25

Semester Subject

: IV

: Object Oriented Programming with JAVA

Subject Code Max. Marks

Roll No.

: BCS-403 : 20

Time

: 1 hrs=60 min

COURSE OUTCOMES			
CO1	CO1 Develop the object-oriented programming concepts using Java		
CO2	CO2 Implement exception handling, file handling, and multi-threading in Java		
CO3	CO3 Apply new java features to build java programs.		
CO4	CO4 Analyse java programs with Collection Framework		
CO5	Test web and RESTful Web Services with Spring Boot using Spring Framework concepts.	K5	

		Section-A					
Atte	mpt a	all the questions of this section		(1 X5=	=5)		
Q. 1	No.	Question	Marks	CO	BL/ KC*		
	a	List out the fundamental features of Java that make it a robust and portable programming language.	1	CO1	K1		
	b	State the keyword used for defining a constant variable in Java.	1	CO1	ΚI		
1.	ي	Define JVM and byte code in Java Architecture.	1	CO1	K1		
	d	Describe the basic structure of a Java source file.	1	CO1			
	e	Define the concept of JRE in Java.	1	CO1	K2 K1		
		Section-B					
Atte	attempt all the questions of this Section (3X3=9)						
		Define the concept of classes and object in Java with a suitable example					
2		OR	3	COI	K2		
		Explain Interfaces in Java with suitable example.					
/		Elaborate on the concept of inheritance with a code example showing superclass and subclass relation.					
3		OR Explain method over loading in Java with a proper example. Describe the rules that must be followed for method overloading.	3	COI	K2, K4		
4		Describe the use of control flow statements in Java with examples.					
	,	OR	3 CC	COI	K2		
		Describe the concept of abstraction using abstract classes and interfaces with examples.					
		Section-C					

CO -Course Outcome generally refer to traits, knowledge, skiil set that a student attains after completing the course

Bloom's Level (BL) - Bloom's taxonomy framework is planning and designing of assessment of student's learning.

^{*}Knowledge Categories (KCs): F-Factual, C-Conceptual, P-Procedural, M-Metacognitive



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Roll No.

Attempt all the questions of this Section			(6X1=6)		
		Illustrate Constructors and their applications in Java. Describe the types of constructors used in Java. Write a class with name Student with attributes roll_number, name, branch and email. Write all argument constructor for class Student and create two objects with this constructor. OR Illustrate polymorphism and its types in Java. Differentiate between run-time and compile-time polymorphism. Write super class Shape with method displayArea() and sub class Rectangle. Demonstrate method overriding with this example.	6	COI	K 2

NBA Coordinator

Module Coordinator