MMC202

Second Semester MCA Degree Examination, June/July 2025
Object Oriented Programming using Java

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level, C: Course outcomes.

	M	L	C
Module – 1			
List and explain the features of java.	10	L2	CO1
Explain narrowing and widening type casting with example.	7	L2	CO1
Write short note on Garbage collector.	3	L1	CO1
OR			
Explain *this* keyword with example program.	6	L3	CO1
Describe object as parameter with example.	6	L2	CO1
Explain the following : i) Access specifier ii) command-line -argument	8	L2	CO1
Module – 2			
What is inheritance? Explain single inheritance with suitable example program	7	L3	CO2
Write a note on final with inheritance.	6	L1	CO2
Describe the role of the super keyword in Java. Provide a suitable Java program to demonstrate its functionality.	7	L2	CO2
OR			
What is a String in Java? List the different constructors of the String class can be used to create string objects. Explain any two.	6	L2	CO2
Explain how to modify a string by using following methods with syntax i) substring( ) ii) concat( ) iii) replace( ) iv) trim( )	8	L2	CO2
Define generics in Java. Write a Java program to demonstrate how generics enhance type safety and eliminate the need for explicit type casting.	6	L2	CO2
Module – 3			
Define package. Explain how to create and import a user defined package in java with an example.	10	L3	CO3
Explain the concept of interfaces in Java. How do interfaces support multiple inheritance? Write a Java program to demonstrate the implementation of an interface.	10	L3	CO3
OR			
What is the use of multiple catch statements in Exception handling? Discuss with a java program	10	L2	CO3
Write a java program which uses throws keyword for handling Exception.	10	L3	CO3

		Module – 4			
Q.7	a.	Define a Thread. Explain the different ways of creating threads.	7	L2	CO4
	b.	What is the need of synchronization? Explain with an example how synchronization is implemented in java.	7	L3	CO4
	c.	Write short note on, i) isAlive( ) ii) join( )	6	L1	CO4
		OR			
Q.8	a.	Write a program to create multiple threads in Java	8	L3	CO4
	b.	Explain the concept of thread priorities in Java. How do they affect thread execution?	6	L2	CO4
	c.	What do you understand by Byte Streams in Java? Describe their working and importance in handling binary data.	6	L1	CO4
		Module – 5			
Q.9	a.	Write a Java program to handle mouse events using the MouseListener interface.	10	L3	CO5
	b.	Explain the following methods of Graphics class with example i) drawRect( ) ii) drawOval( )	10	L3	CO5
		OR			
Q.10	a.	Explain the fundamental components of a window in a graphical user interface	10	L2	CO5
	b.	Explain how to create and display a Frame window in Java AWT. Provide a sample program to demonstrate this.	10	L2	CO5

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