



22MCA341

Third Semester MCA Degree Examination, Dec.2024/Jan.2025

Advanced Java & J2EE

Max. Marks: 100

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

Module – 1				M	L	C
Q.1	a.	Illustrate with an example how enumerations are declared and used in Java Programming.		8	L2	CO1
	b.	Describe Auto boxing and Un-boxing and how it is different from boxing and unboxing. Illustrate with an example.		6	L2	CO1
	c.	Justify Java Enumeration is a class type with an example.		6	L2	CO1
OR						
Q.2	a.	Explain the various types of wrappers used in Java.		8	L2	CO1
	b.	What are an annotation? Explain the following built-in annotations: (i) Override (ii) Inherited (iii) Retention		6	L2	CO1
	c.	Explain the following methods of Java-lang-Enum with example : (i) Ordinal (ii) CompareTo (iii) Equals ()		6	L2	CO1
Module – 2						
Q.3	a.	Demonstrate linked lists for collections with example.		7	L3	CO1
	b.	Demonstrate ArrayList Class collection with example.		6	L3	CO1
	c.	Explain ArrayList Class and explain the following method : (i) insert (ii) append (iii) replace (iv) substring.		7	L3	CO1
OR						
Q.4	a.	Explain the following map classes : (i) HashMap (ii) TreeMap		7	L2	CO1
	b.	Discuss the following collection integers set list.		6	L2	CO1
	c.	Explain any four legacy collection of framework.		7	L2	CO1
Module – 3						
Q.5	a.	Provide an example demonstrating character extraction from a string using charAt().		8	L2	CO2
	b.	List and explain two constructors used for creating string in Java.		4	L2	CO2
	c.	Discuss the differences between StringBuffer and StringBuilder.		8	L2	CO2

OR						
Q.6	a.	Provide an example illustrating the use of the toString () method.		6	L2	CO2
	b.	Provide an example illustrating the use of equalsIgnoreCase ().		8	L2	CO2
	c.	Discuss how string concatenation work with other data types in Java.		6	L2	CO2

Module – 4						
Q.7	a.	Explain the life cycle of a Servlet.		4	L2	CO3
	b.	Discuss potential security considerations related to the use of cookies in JSP.		8	L2	CO3
	c.	Discuss different techniques for session tracking in Servlets.		8	L2	CO3

OR						
Q.8	a.	Provide a code example demonstrating how to set and retrieve cookies in a Servlet.		8	L3	CO3
	b.	Define JavaServer Pages (JSP) and their role in web development.		6	L2	CO3
	c.	Discuss the integration of Tomcat with Java Server pages. What steps are involved in deploying JSP pages in Tomcat?		6	L2	CO3

Module – 5						
Q.9	a.	Discuss the role of the JDBC / ODBC bridge in database connectivity.		8	L2	CO3
	b.	Compare and contrast statement, prepared statement and callable statement.		8	L2	CO3
	c.	Outline the basic steps involved in a typical JDBC process.		4	L2	CO3

OR						
Q.10	a.	Discuss how a Java application interacts with database using JDBC.		6	L2	CO3
	b.	Explain how to setup and associate the JDBC / ODBC bridge with a database.		8	L2	CO3
	c.	Discuss the significance of the Java.sql.connection interface in database connectivity.		6	L2	CO3
