



Fifth Semester B.E. Degree Examination, Dec.2023/Jan.2024
Advanced JAVA and J2EE

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Create an enumeration called colors with 4 enumerations constant and assign a color code to each color. Write a program to print all the Enumeration constants and the color code associated with that using suitable method. (08 Marks)
- b. Infer the need of autoboxing and unboxing in the content of programming, also depict how manual boxing and unboxing is done using a simple program. (06 Marks)
- c. How are Annotations different from comments. Justify your answer using suitable reasons. Create a custom annotation called MyAnno containing 2 methods and how to apply it for a method. (06 Marks)

OR

- 2 a. Explain any four Built-in Annotations with suitable code snippets. (08 Marks)
- b. Can enumerates be treated as class in Java? If, so justify your answer using a suitable program. (06 Marks)
- c. Consider a simple Java program of adding two numbers. If it a wipe choice to use. Wrapper classes to implement it list and explain any 4 wrapper classes with its constructors. (06 Marks)

Module-2

- 3 a. Create a Hash set containing the elements does it preserve the insertion order of elements provide suitable output and explain. (06 Marks)
- b. What are Collections? Describe the need of it and list atleast any four methods of collection interface with its use. (06 Marks)
- c. Infer the need of Iteration in collection create a collection containing user defined objects and print all the elementary of the collection. (08 Marks)

OR

- 4 a. Create a TreeSet containing the elements as {6, 8, 4, 3, 1, 9}. With the help of a comparator implement it to sort and print the elements in descending order, also explain comparator interface. (08 Marks)
- b. Create an Array list containing the elements as {3, 6, 12, 15} insert the value 9 into the array list to print the tables of 3 upto 5 digits. Also, explain Array list class with the construction supported. (06 Marks)
- c. What are Generics? How are generics helpful in creating collections? Explain the recent change to collections. (06 Marks)

Module-3

- 5 a. How are strings treated in Java? Explain atleast three of the string construction. Used to create strings in Java with an example. (06 Marks)
- b. Given a string "EXTRACTION" write a program by applying suitable methods to
 - i) Replace E with S
 - ii) Extract only a part of the string and print as "TRACTION"
 - iii) Extract only "R" from the string. (06 Marks)
- c. Explain the methods i) Capacity ii) Region matches iii) reverse iv) delete charAt() (08 Marks)

OR

- 6 a. Differentiate between string, string Buffer and string builder classes in Java. Explain the following methods with respect to string Buffer class. i) append ii) Insert iii) replace iv) set length. Demonstrate the following with the help of a simple program. (08 Marks)
- b. What are string literals? Write and explain the suitable string methods for the following :
- To convert the characters in string to character array
 - To find the length of a string
 - To compare to string by ignoring the case
 - To find whether the string start with a certain string. (08 Marks)
- c. Explain any two string searching methods for a particular character or substring with a suitable example. (04 Marks)

Module-4

- 7 a. What are Servlets? Explain the different phases of the life cycle of servlet with the packages required to create servlets. (08 Marks)
- b. List and explain the core classes and interfaces of servlet package. (08 Marks)
- c. Explain the advantages of using servlet over traditional CGI. (04 Marks)

OR

- 8 a. Write a Java Servlet program that demonstrates how parameter can be accessed from HTML. (08 Marks)
- b. Define JSP. Explain the different JSP tags by taking suitable example. (08 Marks)
- c. What are cookies and how are they helpful? (04 Marks)

Module-5

- 9 a. What is JDBC? Explain the 4 JDBC Drivers. (08 Marks)
- b. Describe the various steps used to establish JDBC connectivity with the code snippets. (08 Marks)
- c. List the packages required for JDBC and explain about JDBC exceptions. (04 Marks)

OR

- 10 a. Explain the different types of statements in JDBC with their usage and differentiate between them. (08 Marks)
- b. How does JDBC process the result set returned by DBMS. Write a simple code snippet to demonstrate it using the result set generated by execute query. (10 Marks)
- c. If the Result set scrollable by default if not, mention the changes to incorporate to make the result set scrollable. (02 Marks)
