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21CS642

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025
Advanced Java Programming

Time: 3 hrs.

Max. Marks: 100

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

Module-1

1 a. What is autoboxing? Write a Java program to demonstrate auto boxing/unboxing occurs inside the expression. **(06 Marks)**

   b. Demonstrate with a Java program values( ) and valueOf( ) methods? **(08 Marks)**

   c. Define annotations. Demonstrate Maker annotation. **(06 Marks)**

OR

2 a. Demonstrate with a Java program, wrapper class. **(06 Marks)**

   b. Explain with an example how annotation can be send at runtime. **(08 Marks)**

   c. Explain ordinal values. Compare and contrast with equal enumeration with example. **(06 Marks)**

Module-2

3 a. What is generics? Demonstrate two type parameter generic class. **(08 Marks)**

   b. Write a Java program to demonstrate bounded types. **(06 Marks)**

   c. Explain Generic Class Hierarchies with example. **(06 Marks)**

OR

4 a. Explain Generic Interfaces with an example. **(06 Marks)**

   b. Write a Java program to demonstrate wild card arguments in Java generics. **(07 Marks)**

   c. Explain Bridge methods in Java generics. **(07 Marks)**

Module-3

5 a. Define String. Write a Java program to demonstrate constructor of string class. **(05 Marks)**

   b. Explain string handling methods to modify a string. **(10 Marks)**

   c. Develop a Java program to count the occurrence of character in given string. **(05 Marks)**

OR

6 a. Explain the following character extraction methods:
     (i) CharAt( )   (ii) toCharArry( )   **(06 Marks)**

   b. Explain any 5 string buffer methods with an example.   **(10 Marks)**

   c. Explain any two string comparison method.   **(04 Marks)**

Module-4

7 a. Explain the life cycle of a servlet with a neat diagram.   **(04 Marks)**

   b. Write a Java program to display sum of two numbers on browser.   **(10 Marks)**

   c. Write a Java program to create a cookie.   **(06 Marks)**

OR

8 a. What is JSP? Explain the various types of JSP tags with examples.   **(10 Marks)**

   b. Explain the concept of reading servlet parameter with an example.   **(10 Marks)**

Module-5

9 a. Explain 4 types of JDBC drivers.   **(08 Marks)**

   b. Describe the following concepts :
     i)   Scrollable result set
     ii) Callable statement
     iii) Transaction processing
     iv) Updateable result set   **(12 Marks)**

OR

10 a. Describe the various steps involved in JDBC process with a code snippet.   **(10 Marks)**

    b. List and explain the three kinds of exceptions occurred in JDBC with an example. **(10 Marks)**

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