21CS642

USN

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.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 are enumerations? How to use enum constructor, instance variable and method? Explain with an example. **(08 Marks)**

   b. Explain how to obtain all annotations associated with a class and a method with a example. **(08 Marks)**

   c. Explain the various typewrappers used in java. **(04 Marks)**

OR

2 a. Explain the following with respect to annotations :
      (i)   Single member Annotations
      (ii) Default values in annotations. **(08 Marks)**

   b. What is autoboxing? Write a java program that demonstrates autoboxing and unboxing occurs inside expressions. **(06 Marks)**

   c. What are Annotations? Explain the following built-in annotations with examples :
      (i)   @Override
      (ii)   @Target
      (iii) @SuppressWarning **(06 Marks)**

Module-2

3 a. What are generics? Why Generics are required? Develop a simple program to show the concept of generics. **(08 Marks)**

   b. What are Bounded types? Demonstrate the use of bounded types with example program. **(06 Marks)**

   c. Describe Overriding methods in a generic class. **(06 Marks)**

OR

4 a. Why wild cards are required in Generics? Explain with an example program. **(08 Marks)**

   b. What is type Erasure? Describe Bridge methods with code snippet. **(06 Marks)**

   c. Explain Generic Super Class and Generic Sub Class with code Snippet. **(06 Marks)**

Module-3

5 a. Explain the string comparison methods with suitable examples. **(08 Marks)**

   b. Explain various string constructors in java with example. **(04 Marks)**

   c. What is String Buffer? How it is differ from string? Explain any six buffer methods. **(08 Marks)**

<div align="center">OR</div>

6   a.   How Compare Toll method differs from Compare To Ignore Case ( ) method? Develop a Java program to so + an array of string in descending order by ignoring case. **(08 Marks)**

    b.   Explain different methods to modify the strings objects by using string Class with an example. **(06 Marks)**

    c.   Describe different character extraction methods with example. **(06 Marks)**

<div align="center"><u>Module-4</u></div>

7   a.   What is Servlet? Explain life cycle of Servlets. Differentiate between Servlets and JSP. **(07 Marks)**

    b.   Develop a program using Servlets that contains HTML page to accept Username and address and Display Greeting message as "Hello Username-address, How are you" in the browser window. **(07 Marks)**

    c.   What are Cookies? Explain how Cookies are handled in Servlets? Develop a program to create a Cookie with frame "Username" and Cookie value "XYZ". And also, display stored cookie in a web page. **(06 Marks)**

<div align="center">OR</div>

8   a.   What is JSP? Explain different JSP tags with example. **(07 Marks)**

    b.   What is Session Object? Develop a program to create and read session object using JSP. **(07 Marks)**

    c.   List and explain core classes and interfaces that are provided in Javax.Servlet.http package. **(06 Marks)**

<div align="center"><u>Module-5</u></div>

9   a.   Describe the various steps of JDBC process with code snippets. **(08 Marks)**

    b.   What is JDBC? Explain the four different types of JDBC drivers. **(06 Marks)**

    c.   What are Transactions? Develop a program to demonstrate how to process a database transaction. **(06 Marks)**

<div align="center">OR</div>

10   a.   Briefly explain statement object. Develop a java program to demonstrate execute Query ( ) and executeUpdate ( ) methods. **(10 Marks)**

    b.   What is meta data? Develop a program to display table name, column, count and structure of the table with size and data types. **(10 Marks)**

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