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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 an 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 (08 Marks)
 - (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) @SuppressWarnings (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)

OR

- 6 a. How CompareToll method differs from CompareToIgnoreCase () method? Develop a Java program to sort 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)

Module-4

- 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 name "Username" and Cookie value "XYZ". And also, display stored cookie in a web page. (06 Marks)

OR

- 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)

Module-5

- 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)

OR

- 10 a. Briefly explain statement object. Develop a java program to demonstrate executeQuery () 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)
