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21CS654

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Programming in JAVA

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1 a. Discuss three OOPs principles. **(10 Marks)**
   b. Explain the following :
      i) Identifiers
      ii) Literals
      iii) Comments. **(06 Marks)**
   c. Explain array declaration and initialization in Java with suitable examples. **(04 Marks)**

OR

2 a. Discuss primitive data types used in Java. **(08 Marks)**
   b. Explain type conversion and casting in Java with suitable examples. **(08 Marks)**
   c. Explain scope and lifetime of variables with an example. **(04 Marks)**

Module-2

3 a. What are the different types of operators in Java? Explain them. **(08 Marks)**
   b. With the help of program, explain the following Java's selection statements,
      i) if else   ii) if – else if ladder. **(06 Marks)**
   c. Write a java program to perform simple calculator operation. **(06 Marks)**

OR

4 a. Explain the following with an example program :
      i) for each   ii) labelled break. **(08 Marks)**
   b. With an example, explain ternary operator. Write a java program to find the largest of three numbers using ternary operator. **(05 Marks)**
   c. Write a java program to implement bubble sort for 10 integers. **(07 Marks)**

Module-3

5 a. Explain different access specifies with examples. **(06 Marks)**
   b. Write a java program to implement stack operations. **(08 Marks)**
   c. Explain recursion in java with example. **(06 Marks)**

OR

6 a. What is inheritance? Discuss different types of inheritance with suitable example. **(10 Marks)**
   b. Explain following keywords supported in Java.
      i) this   ii) static   iii) super. **(06 Marks)**
   c. What are constructors? Explain with an example. **(04 Marks)**

Module-4

7 a. What is Package? How to create and import package in Java? Explain with an example. **(10 Marks)**
   b. What is an Interface? Explain how to define and implement interface by taking suitable example. **(10 Marks)**

OR

8 a. What is an exception? Explain the different exception handling mechanism with an example.
       (08 Marks)
   b. How do you create your won exception class? Explain with a program.   (08 Marks)
   c. Explain uncaught exception.   (04 Marks)

Module-5

9 a. Explain the following :
       i)   Enumerations
       ii) Type wrappers.   (10 Marks)
   b. List and explain any four constructors of string class with suitable example. (10 Marks)

OR

10 a. Explain the following :
       i)   String comparison method
       ii) Modifying a string.   (10 Marks)
   b. Explain the following with respect to string buffers.
       i)   Append
       ii) insert( )
       iii) reverse
       iv) delete
       v)   setCharAt( ).   (10 Marks)

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