18CS45

Fourth Semester B.E. Degree Examination, June/July 2025
Object Oriented Concepts

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1   a. List and explain the basic building blocks of object oriented programming.   **(10 Marks)**
    b. Define function overloading? Write a C++ Program using overloaded function area to find the area of circle, square and rectangle.   **(10 Marks)**

OR

2   a. List out the differences between POP and OOP.   **(05 Marks)**
    b. What is reference variable? Explain with an example.   **(05 Marks)**
    c. Define a student class with the following:
        Data members : Name, roll no. average marks
        Member Functions: to read data, compute average and to print the data.
        Write a C++ program to read the data of 5 students, find average and print.   **(10 Marks)**

Module-2

3   a. List and explain Java Buzzwords.   **(10 Marks)**
    b. What is constructor? List the different types of constructor and explain with example.   **(10 Marks)**

OR

4   a. Explain the types of arrays in Java with examples.   **(10 Marks)**
    b. List and explain various looping statements used in java with examples.   **(10 Marks)**

Module-3

5   a. Define Inheritance? List and explain different types of inheritance in Java.   **(10 Marks)**
    b. Define Exception? Write a java program to demonstrate array index out of bounds and divide by zero Exceptions and to handle them.   **(10 Marks)**

OR

6   a. Illustrate the various ways of using super keyword in Java with suitable examples.   **(10 Marks)**
    b. Explain -
        i) Java garbage collection
        ii) Method overriding   **(10 Marks)**

Module-4

7   a. Define package? What are the steps involved in creating user defined packages? Explain with example.   **(10 Marks)**
    b. Illustrate with an example the use of is Alive ( ) and join ( ) method for Java threads.   **(10 Marks)**

OR

8   a. Explain with example the following :
        i) Wait ( )
        ii) notify ( )
        iii) notifyall ( )   **(10 Marks)**
    b. Write a java program to implement Producer – Consumer Problem using threads.   **(10 Marks)**

Module-5

9   a. Explain key features of swings in Java.   **(10 Marks)**
    b. Explain the delegation Event Model.   **(08Marks)**
    c. Write a short note on Adapter class.   **(02 Marks)**

OR

10   Write short notes on :
     i) Jlabel
     ii) JTextfield
     iii) JButton
     iv) JComboBox
     v) Jtable   **(20 Marks)**

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