CBCS SCHEME

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18CS45

Fourth Semester B.E. Degree Examination, June/July 2023
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. What is the need of structure? Explain with suitable examples. **(06 Marks)**

b. List and explain any four features of Object Oriented Programming. **(08 Marks)**

c. What is an inline function? Develop a C++ inline function to find maximum of two numbers. **(06 Marks)**

OR

2 a. What is the different between array of objects with array within objects. **(06 Marks)**

b. Explain the use of scope resolution operator with example program. **(08 Marks)**

c. List out the difference between procedure oriented programming with object oriented programming. **(06 Marks)**

Module-2

3 a. Define friend function. Illustrate with an example program. **(06 Marks)**

b. List and explain java buzz word. **(06 Marks)**

c. Write the program to calculate the average among the elements {4, 5, 7, 8} using for each in Java. Also show how for each is different from for loop. **(08 Marks)**

OR

4 a. List the characteristics of constructor. Implement a C++ program to define suitable parameterized constructor with default values for the class distance with data members feet and inches. **(08 Marks)**

b. What is nested class? Explain the use of nested class with suitable example program. **(06 Marks)**

c. What is namespace? Explain with suitable example. **(06 Marks)**

Module-3

5 a. Define inheritance and also define multilevel hierarchy with an example. **(10 Marks)**

b. Define "this" keyword and explain with example program. **(04 Marks)**

c. Define exception. Write a program with IllegalAccessException. Use proper exception handler so that exception should be printed. **(06 Marks)**

OR

6 a. Illustrate method overriding. Explain the rules to be followed while overriding a method. **(08 Marks)**

b. Write the difference between throw and throws keyword with suitable example Java program. **(08 Marks)**

c. Explain the use of "Super" keyword with example Java program. **(04 Marks)**

Module-4

7 a. Define Thread. Demonstrate thread priorities in Java with example program. **(10 Marks)**

b. Briefly explain the role of interfaces while implementing multiple inheritance in Java. **(05 Marks)**

c. Demonstrate different levels of access protection available for package and their implications. **(05 Marks)**

OR

8 a. Demonstrate the role of synchronization in producer and consumer problem. **(10 Marks)**

b. Define package and also explain the steps involved in creating user defined packages with an example program. **(06 Marks)**

c. Explain the two ways of creating thread in Java. **(04 Marks)**

Module-5

9 a. Develop a swing applet that has four checkbox items like C, C++, Java and Python. When anyone of the checkbox item is selected, it should display "C checked", "C++ checked and so on. **(10 Marks)**

b. Build JLabel and JImageIcon with example Java program. **(06 Marks)**

c. Explain adapter class with an example. **(04 Marks)**

OR

10 a. Explain the following with an example for each and syntax:
i) JLabel
ii) JComboBox
iii) JTextField
iv) JButton **(10 Marks)**

b. Illustrate JTable with suitable example. **(06 Marks)**

c. Describe two key features of SWING program. **(04 Marks)**

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