USN | | | | | | | | | | **18CS45**

Fourth Semester B.E. Degree Examination, Feb./Mar.2022
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. Explain the various features of OOC.   **(08 Marks)**
    b. What is data abstraction? How it is implemented in C++.   **(06 Marks)**
    c. With the example C++ program, explain Reference variables.   **(06 Marks)**

OR

2 a. Explain function prototyping with example for function parameter passing.   **(06 Marks)**
    b. Why Friend function is required, write a program to add two numbers using Friend Function.   **(08 Marks)**
    c. What is static member of a class? Write a C++ program to count the number of objects created.   **(06 Marks)**

Module-2

3 a. What is constructor? List the different types of constructors and explain the default constructor with example.   **(08 Marks)**
    b. Discuss the label break and continue with example.   **(05 Marks)**
    c. Explain the concepts of arrays in Java with examples of single Dimension and Two Dimension arrays.   **(07 Marks)**

OR

4 a. List and explain Java buzz words.   **(08 Marks)**
    b. What is nested class? Explain how nested class can be defined as private of enclosing class with example.   **(05 Marks)**
    c. List and explain different iteration.   **(07 Marks)**

Module-3

5 a. Compare and contrast method overloading and method overriding with examples. **(08 Marks)**
    b. What are the uses of Inheritance? Explain inheriting data members and method with a program.   **(06 Marks)**
    c. What is exception? How Java supports exception handling mechanism give example.
                                                                              (06 Marks)

OR

6 a. When constructors are called in the class hierarchy?   **(06 Marks)**
    b. Explain garbage collector.   **(08 Marks)**
    c. Write a short notes on "Super keyword with example"   **(06 Marks)**

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Module-4

7 a. Define package. What are the steps involved in creating user defined package with an example. **(08 Marks)**

b. Describe thread priority. How to assign and get the thread priority. **(06 Marks)**

c. Explain the following, with syntax and example:
(i) wait( )   (ii) notify( )   (iii) notifyAll( ). **(06 Marks)**

OR

8 a. Explain changing state of the thread. **(08 Marks)**

b. Explain synchronization using synchronized methods. **(08 Marks)**

c. Explain isAlive( ) and join( ) methods. **(04 Marks)**

Module-5

9 a. Explain any 8 event listener inter-faces with syntax. **(08 Marks)**

b. Explain different methods of applet. **(06 Marks)**

c. Explain the HTML applet with syntax and example. **(06 Marks)**

OR

10 a. Explain with syntax:
    (i)   JLabel
    (ii)   JTextField
    (iii)   JButton
    (iv)   JCheckBox
    (v)   JComboBox **(10 Marks)**

b. Explain a simple swing application with program. **(10 Marks)**

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