17CS42

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Fourth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Object Oriented Concepts

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1   a.   Explain how C++ allows member functions in structures. Give example.   (06 Marks)
    b.   What is data abstraction? How is it implemented in C++?   (06 Marks)
    c.   What is function overloading? Write a C++ program to define three overloaded functions area ( ) to find area of circle, triangle and rectangle.   (08 Marks)

OR

2   a.   How we can make some specific member functions of one class friendly to another class?
                                                                                        (06 Marks)
    b.   What is constructor? List the different types of constructors and explain default constructor with example.   (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.   List and explain the java buzzwords.   (08 Marks)
    b.   Explain the concepts of arrays in java with examples.   (07 Marks)
    c.   Explain type conversion in java with an example.   (05 Marks)

OR

4   a.   Write a java program to initialize and display different types of integer and floating point variables.   (05 Marks)
    b.   List and explain different jump statements used in java with examples.   (07 Marks)
    c.   List and explain different iteration statements used in java with examples.   (08 Marks)

Module-3

5   a.   Write a program in java to implement a stack operations that can hold 10 integers. (07 Marks)
    b.   Compare and contrast method overloading and method overriding with examples. (08 Marks)
    c.   Describe the significance of super in java. Give example.   (05 Marks)

OR

6   a.   Define package. What are the steps involved in creating user defined package with an example.   (08 Marks)
    b.   What is an exception? How java supports exception handling mechanism. Give example.
                                                                                        (07 Marks)
    c.   Explain how variables in interfaces are used. Give example.   (05 Marks)

Module-4

7   a.   What is thread? Explain two ways of creation of threads.   (07 Marks)
    b.   Describe thread priority. How to assign and get the thread priority.   (07 Marks)
    c.   Explain the following with syntax and example,
         (i) wait ( )   (ii) notify ( )   (iii) notifyAll ( ).   (06 Marks)

OR

8 a. What is meant by deadlock? How to avoid deadlock? Give example. **(10 Marks)**
   b. Briefly explain the role of inner class and anonymous inner class in java. **(05 Marks)**
   c. What is an event class? List and explain different event classes available in java. **(05 Marks)**

Module-5

9 a. Explain the five methods of Applet. **(05 Marks)**
   b. Explain the HTML Applet tag with syntax and example. **(07 Marks)**
   c. Write a swing program for displaying any one of the options : C, C++, Java, PHP through the selection of combo box by clicking the show button. **(08 Marks)**

OR

10 a. Explain with syntax:
       (i) JLabel   (ii) JTextField   (iii) JButton   (iv) JCheckBox   (v) JComboBox. **(10 Marks)**
    b. Write a program to create a table with column headings such as Fname, Lname, Address, Age and insert at least 5 records in the table and display. **(10 Marks)**

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