USN | | | | | | | | | | **18CB45**

Fourth Semester B.Tech. Degree Examination, July/August 2022
Object Oriented Programming 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 class? Explain with an example.   **(10 Marks)**
    b. Comparison of C and C++.   **(10 Marks)**

OR

2 a. What is variable in C++? Explain with an example.   **(10 Marks)**
    b. What is overloaded member function? Explain with an example.   **(10 Marks)**

Module-2

3 a. Explain the following C++ programs
      i) Creating an array dynamically using new operator
      ii) Creating an array dynamically when its size is specified during runtime.   **(10 Marks)**
    b. What is Constructor? Explain with an example.   **(10 Marks)**

OR

4 a. What is Inheritance? Explain with an example.   **(10 Marks)**
    b. Write a C++ program for the following terms :
      i) Derived class and its base class
      ii) Base class pointer pointing at a derived class object.   **(10 Marks)**

Module-3

5 a. How virtual function remain virtual, explain with the C++ program.   **(10 Marks)**
    b. What is pure virtual function? Explain with the syntax and example.   **(10 Marks)**

OR

6 a. Write a C++ program for pre-validating function parameters to avoid error condition.
                              (10 Marks)
    b. Write a C++ program for reversal of flow of control from the point of throw to the try block.
                              (10 Marks)

Module-4

7 a. Write a C++ program for defining and using operator – overloading function as a member function.   **(10 Marks)**
    b. Explain the rules for operator overloading.   **(10 Marks)**

OR

8   a.   Write a C++ program for calling the template for the function swap by passing integers.
                                                                                        (10 Marks)
    b.   Explain the following terms :
         i)   Overloading a function template
         ii) Classes with similar definition.   **(10 Marks)**

Module-5

9   a.   With a neat diagram explain the library classes that handle streams.   **(10 Marks)**
    b.   Write a C++ program for the following terms :
         i) Outputting a character in text mode by using the insertion operator.
         ii) Outputting an integer in text mode by using the insertion operator.   **(10 Marks)**

OR

10   Write short notes on :
    a.   File pointers
    b.   Error handling
    c.   Opening and closing files
    d.   Text versus binary files.   **(20 Marks)**

* * * * *