1079

B.E. (Computer Science and Engineering)
Second Semester
CS-202: Object Oriented Programming

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Write short answers of the following:-
    a) What are identifiers and keywords?
    b) What is the use of scope resolution operator?
    c) List the operators that cannot be overloaded in C++.
    d) Why do we need virtual functions?
    e) What is a default constructor?   (5x2)

UNIT – I

II. a) Describe in detail principles of object oriented programming.

    b) Describe in brief the syntax and usage of various control structures available in C++.   (5,5)

III. a) What is multiple inheritances? What is the problem that can arise when two parent classes of a particular class have common ancestor? How would you solve this problem?

    b) Define a class string with appropriate constructors, destructors and overloaded +, = and == operators and use them in a main program.   (5,5)

IV. a) What are pointers? Describe with the .help of an example, how the elements of an array can be accessed with the help of pointers.

    b) What is need of copy constructors? How do you implement them in C++? Describe with the help of an example.   (5,5)

UNIT – II

V.   a) What is runtime polymorphism? How virtual functions can be used to implement the runtime polymorphism? Explain with an example.

    b) Write a template function to take, as arguments, either two integers, real numbers or characters and return 1 if they are equal and 0 otherwise. How will the function be called in the function main()?   (5,5)

P.T.O.

VI. a) With the help of an example, describe overloading of template functions.

b) Write a C++ program to read a text file and display the contents, number of lines, number of words, and number of characters on the screen.   (5,5)

VII. Write short notes on:-

a) Standard template library

b) Exception handling   (5,5)

x-x-x