BT-3/D-22   **43141**

COMPUTER SCIENCE AND ENGINEERING
Object Oriented Programming
PC-CS-203

Time : Three Hours]   [Maximum Marks : 75

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) When do we need to use default arguments in a function ? What is the main advantage of passing arguments by reference ?

(b) Write a C++ program to swap two numbers using pointers.

2. (a) Write an object oriented program in C++ to count the number of occurrances of the specific character in the text.

(b) What is the difference between early binding and late binding in C++ ?

3. (a) What are the differences between static and dynamic memory ?

(b) What is inheritance ? What are the advantages and disadvantages of inheritance ?

4. (a) What are the specific characteristics of constructor functions ?

   (b) Differentiate between compile time polymorphism and runtime polymorphism.

5. (a) Under what circumstances overloading using friend function becomes necessary ?

   (b) Give reasons for assigning protected visibility specifier to a class member.

6. (a) What is a virtual base class ? Why is it important to make a class virtual ?

   (b) What is the use of declaring the virtual destructors under multiple inheritance ?

7. (a) Explain, how array of class objects can be stored and retreived from a file ?

   (b) How to overload Template function ? Explain.

8. (a) What is Exception ? How to catch multiple exceptions ?

   (b) Write a program for catching array out of bound exception.