CBCS SCHEME

17EC562

Fifth Semester B.E. Degree Examination, July/August 2021
Object Oriented Programming using C++

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions.

1 a. Explain different control structures in C++. **(09 Marks)**
   b. Explain the application of scope resolution operator with an example program. **(07 Marks)**
   c. Describe identifiers and constants. **(04 Marks)**

2 a. Explain: i) Input operator   ii) Output operator and   iii) Comments in C++. **(09 Marks)**
   b. Explain user defined data types in C++. **(07 Marks)**
   c. Write a program to add first N natural numbers. **(04 Marks)**

3 a. Describe: i) Call by value and   ii) Call by reference method of argument passing to a function with example program. **(06 Marks)**
   b. Explain friend function. Define a class by name myclass, which has two variables a and b. Write a friend function to find mean of a and b and display the result. **(08 Marks)**
   c. Explain the structure of a class with a simple C++ program. **(06 Marks)**

4 a. What is a recursive function? Explain with an example program. **(06 Marks)**
   b. Define a class employee with private variables name and age. Write a program to read the name and age of three managers and display them. **(08 Marks)**
   c. Explain function overloading with example. **(06 Marks)**

5 a. What is a constructor? Mention the characteristics of constructor function. **(06 Marks)**
   b. Write a C++ program to overload binary operator using friend function. **(08 Marks)**
   c. Explain copy constructor with an example program. **(06 Marks)**

6 a. Explain multiple constructors in a class using a C++ program. **(06 Marks)**
   b. Write a C++ program to demonstrate dynamic constructors in a class. **(08 Marks)**
   c. Write a C++ program to overload unary-operator. **(06 Marks)**

7 a. Explain inheritance. Discuss different types of inheritance with diagram. **(06 Marks)**
   b. Describe multiple inheritance with example program. **(08 Marks)**
   c. Explain this pointer with a program. **(06 Marks)**

8 a. What is a virtual function? Mention the rules for virtual function. **(06 Marks)**
   b. Explain single inheritance with suitable program. **(08 Marks)**
   c. Explain how ambiguity is resolved in multiple inheritance. **(06 Marks)**

9 a. Explain C++ stream classes. **(06 Marks)**
   b. What are put( ) and get( ) functions? Explain with example program. **(08 Marks)**
   c. Demonstrate reading from two files simultaneously. **(06 Marks)**

10 a. Explain opening and closing of a single file with example program. **(08 Marks)**
   b. Explain: i) width   ii) precision   iii) fill. **(06 Marks)**
   c. Explain getline( ) and write( ) functions. Demonstrate with example program. **(06 Marks)**

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