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BT-3/D-19 33134

OBJECT ORIENTED PROGRAMMING

PC-CS-203-A

Time : Three Hours] [Maximum Marks : 75

Note : All questions in Part A and B are compulsory. Attempt any *four* questions from Part C, selecting at least *one* question from each Unit.

Part A

1. (a) Explain controlling access function and utility function with example.
   (b) What is the use of new operator ?
   (c) What does polymorphism mean in C++ language ?
   (d) What is throwing an exception ?
   (e) Under what circumstances overloading using friend function becomes necessary. 5×3=15

Part B

2. What is the object oriented programming ? How is it different from procedure oriented programming ? Explain. 5

3. Why is the "Assignment" operator function not inherited ? Explain. 5

4. Differentiate between structure and class. 5

5. Create a template for bubble sort function. 5

Part C

Unit I

6. (a) What is the application of the scope resolution operator :: in C++ ? 5

   (b) Which operator is used to access a class member with respect to pointer ? 5

7. (a) What is data abstraction ? How is it implemented in C++ ? 5

   (b) What is the difference between early binding and late binding in C++ ? 5

Unit II

8. What is inheritance ? How does inheritance influence the size and functionality of derived class objects ? 10

9. (a) Under what conditions does the dynamic memory allocation become mandatory. 5

   (b) What are destructors ? When they are called and what is their utility ? 5

Unit III

10. When do we make a virtual function "pure" ? What are the implications of making a function a pure virutual function ? Explain. **10**

11. Overload the "addition" operator for the string so that it adds two strings and return the result. **10**