

Roll No. ....

Total Pages : 03

BT-3/D-19

33134

OBJECT ORIENTED PROGRAMMING

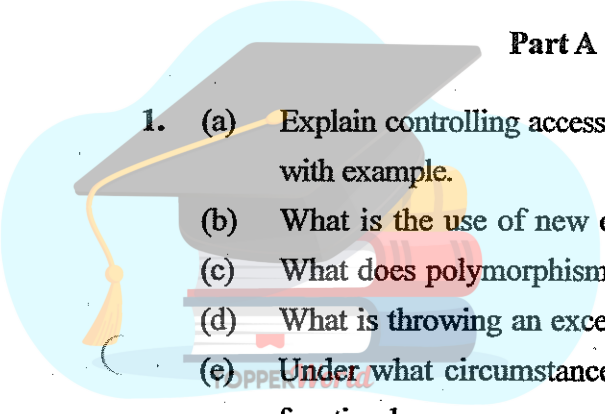
PC-CS-203-A

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**

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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 virtual function? Explain. 10
11. Overload the “addition” operator for the string so that it adds two strings and return the result. 10

