

9. (a) What is the basic difference between manipulators and ios member function in implementation ? Give example. 10
- (b) What is generic programming ? How is it implemented in C++ ? A class template is known as a parameterized class. Comment. 10
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Roll No. ....

**24164**

**B. Tech. 4th Semester (CSE)**

**Examination – May, 2017**

**OBJECT ORIENTED PROGRAMMING USING C++**

**Paper : IT-202-F**

***Time : Three Hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

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**Note :** Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Explain following with suitable examples :  $5 \times 4 = 20$
- (a) Preprocessor directives
  - (b) Access modifiers
  - (c) Container classes and Integrators
  - (d) Virtual destructors
  - (e) Stream manipulators

### SECTION – A

2. (a) What is object oriented programming ? How is it different from the procedural oriented programming ? 12  
(b) What are the role of namespaces in object oriented programming ? Explain. 8
3. (a) Differentiate between structure in C++ and classes in C++. 7  
(b) Explain the concept of reusability in detail. 7  
(c) Write short note on encapsulation. 6

### SECTION – B

4. (a) What is friend function ? What are the merits and demerits of using friend function ? Explain with example. 10  
(b) What is constructor ? Why dynamic initialization of objects is needed ? Illustrate with the help of example. 10
5. (a) What is the need of declaring member of a class static ? Write a program that illustrates the use of static function. 10  
(b) Explain dynamic initialization with new ( ) and delete ( ) functions. 10

### SECTION – C

6. (a) What do you mean by operator over loading ? What are various restrictions in operator over loading ? WAP in C++ to over load binary operator using member function and friend function. 12  
(b) What is the significance of making constructor in a derived class ? Explain with example. 8
7. (a) Write short note on the following :  $5 \times 2 = 10$   
(i) Abstract classes and Concrete Classes.  
(ii) Function overriding.  
(b) What is inheritance ? Explain various forms of inheritance with example. 10

### SECTION – D

8. (a) What is exception handling ? What are the advantages of using exception handling mechanism in a program ? 10  
(b) What is the basic difference between opening a file using a constructor function and open ( ) function. When one method is preferred over other ? 10