

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

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.

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

24164- (P-4)(Q-9)(17) (2) -

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

24164- (P-4)(Q-9)(17) (3) P. T. O.