

Roll No.

2116

B. E. 4th Sem. (I.T.)

Examination – May, 2011

OBJECT ORIENTED PROGRAMMING USING C++

Paper : IT-202-E

Time : Three hours]

[Maximum Marks : 100

Before answering the question, 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 any *five* questions. All questions carry equal marks.

1. (a) What are the features of C++ which makes it different from C ? 10
(b) Describe class Inheritance and Polymorphism with the help of examples. 10
2. (a) Write a program to add two complex numbers $A = 3.1 + j5.5$, $B = 2.7 + j4.1$ using Call by object and return by object. Initialize values of A and B by constructor. 10

- (b) What do you mean by Dynamic constructor. Write a program to implement dynamic constructor. 10
3. (a) What do you mean by operator overloading. Overload + operator to concatenate two strings. 15
- (b) What are the access privileges in C++. What is the default access level. 5
4. (a) What do you mean by Inheritance. Describe in brief various types of Inheritance. 10
- (b) Write a program to implement Multilevel inheritance. 10
5. (a) What do you mean by polymorphism ? Explain with the help of examples how is polymorphism achieved at (1) compile time (2) run time 15
- (b) Explain the use of this pointer. 5
6. (a) What is a file ? What are the various file stream classes. 10
- (b) Write a program to read and display contents of file using eof () function. 10
7. (a) What do you mean by Template. Differentiate between Class template and function template. 8

(b) Write a program to create template based stack.
Store integer and float in it. 12

8. Write short note on any *two* of the following : 20

- (a) Virtual Base Class
- (b) Inline function and virtual function
- (c) This pointer.