

BCA Second Semester Examination- May, 2015

FIRST PAPER

OBJECT ORIENTED PROGRAMMING CONCEPTS

Paper Code: 2711

Time Allowed: Three Hours

Maximum Marks : 70

- (1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.
- (2) All the parts of one question should be answered at one place in the answer book. One complete question should not be answered at different places in the answer book.

(Attempt all six questions.)

Part I (Question No. 1 & 2) is compulsory & part II (Question No. 3, 4, 5 & 6) has internal choice.

PART I

1. Attempt any 10 questions out of the following. Each question carries 1 mark. 10x1=10
(Words limit upto 20 words each)

- What do you mean by Data Binding ?
- List the C++ operator which cannot be overloaded.
- When do we make a Class Virtual ?
- Write special properties of the Constructor Functions.
- What do you understand by the term Abstract Data Type ?
- What is Copy Constructor ?
- What is Static Member Function ?
- What is Class Templates ?
- What is the main advantage of passing arguments by deference ?
- What is Pure Virtual Function ?
- What is Protected Class ?
- What is the name of construct used in the following statement, and how does it operate ?
a= (b>c)? b: c ;

2. Attempt all questions. Each question carries 5 marks. 4X5=20
(Words limit up to 50 words each)

- What are the features of Object Oriented Programming Language ?
- Distinguish between Overloaded Functions and Function Templates.
- Write short note on Polymorphism.
- Write a program to show that the declaration of a class 'Rectangle', which derives from the class 'square', which in turn derives from the class 'shape'.

P.T.O.

PART II

Unit I

3. (i) Discuss how dynamic allocation is achieved in C++ programming.
(ii) Compare between Procedural and Object-Oriented approach:

OR

Write a C++ program to accept a year from the user and check whether it is a Leap year.

Hint.- If a year is divisible by 4 and not divisible by 100, or if the year is divisible by 400, it is a leap year.

Unit II

4. What are Friend Function and Friend Classes ? Write a normal function which adds objects of the complex number class. Declare this normal function as friend of the complex class.

OR

Write a C++ program to add and multiply two complex numbers using constructor.

Unit III

5. What do you mean by Inheritance. Explain different types of inheritance.

OR

- (i) How is polymorphism achieved at run-time ? Explain with suitable example.
(ii) What is Operator Overloading ?

Unit IV

6. (i) What is an Exception ? How is an exception handled in C++ ? Explain.
(ii) Write short note on Standard Template Library ?

OR

Explain the following file functions with suitable example-

- (i) f open ()
(ii) f close ()
(iii) f printf ()
(iv) f scanf ()
