

Roll No

MCA-303

MCA. III Semester

Examination, December 2016

Object Oriented Methodology And C++

Time : Three Hours

Maximum Marks : 70

- Note:* i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each question are to be attempted at one place.
 iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

Unit-I

1. a) Explain the difference between classes and structures in C++.
- b) What do you mean by polymorphism?
- c) What is an inline function? In what situations we make a function inline?
- d) Explain the concept of constructor and destructor. What are the different types of constructors explain with the help of example?

OR

Can we overload a constructor? Give suitable example to prove this statement.

Unit-II

2. a) Explain this pointer.
- b) Write a program to overload+ operator in C++.
- c) Write short note on Multiple Inheritance.
- d) Differentiate between pointer to base and derived class. How can we access the pointer of base class in derived class?

OR

Explain with the help of suitable example the difference between function overloading and function over-riding.

Unit-III

3. a) Define Abstract base classes.
- b) Differentiate between Early and Late binding.
- c) What are some advantages and disadvantages of using friend functions?
- d) What is the meaning of access specifiers? What are the different types of access specifiers? Illustrate with an example showing the concept of access specifiers?

OR

What is the need of virtual function? Explain with the help of example. Also explain the concept of pure virtual function.

Unit-IV

4. a) Differentiate between Catch and Catches?
- b) Explain the seekp and seekg functions in C++.
- c) Explain the various features that can be used to format the output?
- d) What do you mean by exception handling? Write a program to handle exception using try and catch block.

OR

What are the file manipulation operations supported by C++? Explain in detail.

Unit-V

5. a) What are the different types of modeling in UML?
- b) Differentiate between UML Case diagram and traditional Flowchart?
- c) What are the different steps involved in Object Oriented Analysis?
- d) Design a use-case diagram for college.

OR

Discuss the following Aggregation, Generalization and Association.
