IT-303

B. E. (Seventh Semester) EXAMINATION, Dec, 2012

B.E. III Semester

Object Oriented Programming Methodology

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Unit —I

I. (a) What are models of object modeling techniques? Explain the following models- object, dynamic and functional models.

(b) Why we use DFD? Write the difference between DFD and flow chart.

2. (a)Explain why friend function do not contradict the principles of OOPs.

(b)Write a complex class that represent a single complex number and includes method for addition, subtraction and multiplication.

3. Differentiate between

1) Link and association 2) Aggregation and generalization

3) Class diagram and instance diagram 4) Generalization and inheritance

4. (a) What is abstract class? Give an example to explain and compare with concrete class.

(b) What is method overloading ? Write a program to overload an area method.

5. (a) What is dynamic memory allocation? How is it different from static memory allocation and under what condition does the use of dynamic memory allocation become mandatory.

(b) What are constructors and destructors ? When are they called and what is their utility?

Or

6. a) In which order are the constructors and destructors called when an object of the derived class is created explain with program.

b)Explain the different methods of passing object parameters.

7. (a) What are different forms of inheritance supported by c++?Explain them with an example.

(b) What are virtual classes? Explain the need for virtual classes while building a class hierarchy.

8. Write a program having student as an abstract class and create many derived classes such as engineering, science medical etc. from the student class. Create their objects and process them.

9) a) Write an interactive program for manipulating object of distance class. Support member functions for adding and subtracting distance members of two objects.

b) What are empty classes ? can instance empty class be created? Give reasons.

Or

10. Write short notes on:

1) Method wheels 2) Disinheritance 3) Recursive association 4) mandatory profile