Roll No ....

CS - 403

B.E. IV Semester

Examination, December 2015

Object Oriented Technology

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) Write an example to show the need of object interaction.

   b) Define generic class.

   c) Explain abstract data type with example. What are its advantages?

   d) What is dynamic initialization of objects? Justify its important with an example. How it is implemented in programming.

   OR

   Explain what type of operation causes to call copy constructor to be invoked. Write an example to show the use of copy constructor.

Unit - II

a) What do you mean by multiplicity?

b) Define different types of relationships between classes.

c) Write short note on Aggregation vs Generalization.

d) What is the difference between association aggregation and inheritance relationship?

OR

What is the purpose of class diagram? Describe icons used for class relationships.

Unit - III

a) What are the visibility labels for members?

b) Describe multilevel inheritance with example.

c) What is virtual function, define with example?

d) Write a distance class with data members for distance in meters, Centimeters and millimeters. The class must be having overloaded operators + and – for addition and subtraction respectively.

OR

Design a class student, exam and result, where result is inherited from exam and exam in inherited from student. Write possible constructors to initialize the value. Write a main function to test the constructor execution by creating objects.

Unit - IV

4. a) What is container class, Define?

b) Name the characteristics of Object Oriented Programming.

c) What do you meant by object persistent?

d) What is the function supported by file stream classes of performing I/O operations?

OR

Write a class template to represent to a generic vector, include a member functions to perform the following tasks:

i) To Create vector

ii) To modify the value of given element

iii) To multiply by a scalar value

Unit - V

5. a) Define inline function.

b) Explain friend function with example.

c) What are packages? Name some of the package.

d) List some of the most common types of exceptions that might occur in JAVA. Give example.

OR

Write a program to find the greatest of the three given number, using class and constructor functions.

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