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Roll No ....

CS - 403

B.E. IV Semester Examination, December 2014

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) What is the need of modeling?

   b) What is the use of system sequence diagram?

   c) List the relationship used in class diagram.

   d) Explain with an example how use case modeling is used to describe functional requirement, identify the actors, scenario and use case for the example.

OR

What is the purpose of class diagram? Describe icons used for class relationships. How we can use object of software modules?

Unit - II

2. a) What are the difference between a method and message?

   b) What is object identifier?

   c) How do you achieve multiple inheritance in a single inheritance system.

   d) Explain following special feature of object oriented system with example.

   i) Encapsulation and polymorphism

   ii) Inheritance

   iii) Aggregations

   iv) Association

OR

Explain the differences in developing a payroll system with respect to structured approach and object oriented approach.

Unit - III

3. a) What is an abstract use case? Give example.

   b) Write the need of object oriented programming.

   c) Differentiate between class and object.

   d) Discuss the following with example.

   i) Function prototype

   ii) Recursive function

   iii) Actual and formal parameter

OR

Write a program to find n_{cr} using recursion.

Unit - IV

4. a) Define reusability and data hiding.

   b) Write the advantages of unified approach.

   c) What is the common usage of serialization.

   d) Explain advantage of exception. How exception sub classes are created? Create your own exception subclass "My Exclass" which takes on string as input and throws a message "String too large" when the six of string is more than ten characters.

OR

Write a program in which read the content of given file and writes it to the console.

Unit - V

5. a) Explain Inline function and a virtual function.

   b) What are different types of arguments?

   c) How can we call the base method without creating an instance?

   d) Explain the following by giving suitable example.

   i) Association between objects

   ii) Relationship among classes

   iii) Types of aggregation

OR

What is operator overloading? Write a distance class with data member for distance in meters, centimeter and millimeter. The class must be having overloaded operator + and – for addition and subtraction respectively.

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