Roll No .....

CS - 403

B.E. IV Semester

Examination, June 2016

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.

1. a) What are Abstract Data types?

   b) Differentiate between static and dynamic objects?

   c) What do you mean by Information hiding?

   d) Partition a software development problem of your choice into classes, subclasses, objects and method at the highest level of design.

   OR

   What is object oriented programming? How does it differ from structured programming? Discuss the characteristics of object oriented languages.

2. a) What do you understand by Delegation?

   b) Explain recursive association?

   c) What are the different elements of object model?

   d) Discuss the different types of aggregation with the help of an example.

OR

Explain the multiplicity and Navigability with suitable example. Draw the relationship between them?

. a) Give the differences between Static and Dynamic Polymorphism.

   b) Define the term Inheritance with an example.

   c) What is method overloading? Give its advantages in object oriented programming?

   d) What is meant by overriding member function? Explain containership? How does it differ from inheritance?

OR

Write a program to implement multiple inheritance. Give its advantages.

4. a) What are container classes?

   b) What is meant by initializing a file stream object?

   c) What are input and output streams? Give example.

   d) Explain Heterogeneous containers with example.

OR

Define a stream. What are the three streams used for inputting, outputting and both for inputting and outputting?

5. a) What is Unicode? Why Java user Unicode and not ASCII code.

   b) Define interfaces in Java.

   c) Explain how memory allocation failure can be handled in C++?

   d) Write a program in Java to give the following output.

```
        *
      * * *
    * * * * *
      * * *
        *
```

OR

Write short notes :

i) Threads in Java

ii) Exception handling in Java

******