



Examination : Block Sessional

Seat No. : \_\_\_\_\_

Date : 18/10/2013

Day : Friday

Time : 11:00 to 12:15

Max. Marks : 36

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**INSTRUCTIONS:**

1. Figures to the right indicate maximum marks for that question.
  2. The symbols used carry their usual meanings.
  3. Assume suitable data, if required & mention them clearly.
  4. Draw neat sketches wherever necessary.
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**Q.1 Answer the Following : [12]**

- (A) Describe the various classes available for file operations. [2]
- (B) Describe the approaches by which end-of-file condition is detected successfully. [2]
- (C) What is a virtual function? [2]
- (D) What does this pointer point to? Mention any application of this pointer. [2]
- (E) Define polymorphism. [2]
- (F) Explain public, private and protected access specifiers. [2]

**Q.2 Answer the following: [12]**

- (A) What are the values of m and n after the following two statements are executed: [2]  
`int m = 1, n = 0;`  
`n = ++m * m++ * m++;`
- (B) What is containership? How does it differ from inheritance? Explain with suitable example. [4]
- (C) Declare a class called time having hours, minutes and seconds as member variables. [6]  
Define a member function called add\_time that accepts two objects of type time class, performs addition of time in hours, minutes and seconds format and returns an object of type time class. Write appropriate functions for initialization and display of member functions.

**Q.3 Answer the following: [12]**

- (A) Create a class employee which has name, employee code and salary as its data members. [6]  
Derive two classes called manager and clerk from employee. Manager has number of assistance as its data members and clerk has allowance as its data members. Override the function display() in both the derived classes which display information related to it. Use constructor and show how to achieve run time polymorphism.
- (B) Implement a linked list and create a member function addItem(int) to insert items and [6]  
disp\_odd() which displays only odd number from that list.

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