



**DHARMSINH DESAI UNIVERSITY, NADIAD**  
**FACULTY OF TECHNOLOGY**  
**B.TECH. SEMESTER III [IT]**

**SUBJECT: (IT-303) OBJECT ORIENTED PROGRAMMING**

<b>Examination</b>	<b>: Block Exam(Repeater)</b>	<b>Seat No.</b>	<b>:</b> _____
<b>Date</b>	<b>: 17/10/2014</b>	<b>Day</b>	<b>: Friday</b>
<b>Time</b>	<b>: 11:00 to 12:15</b>	<b>Max. Marks</b>	<b>: 36</b>

**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.

**Q.1 Do as directed:** [12]

**(A) Find out the errors in the following, correct them and show the output:** [04]

(i) `void main()  
{ int n=1; int n1 = ++n; int n2 = ++ ++n; int n3 = n++; int n4 = n++ ++;  
Cout << n<<n1<<n2<<n3<<n4;}`

(ii) `#include<iostream.h>  
enum days{sun,mon,tue};  
void main()  
{ int d1,d2;  
d1 = mon; d2 = tue;  
int diff = d2-d1;  
cout<<diff;}`

- (B) Which characteristic of OOP is violated by friend function.  
(C) When does the mode `ios::nocreate` fails while opening a file.  
(D) What is the difference between passing by value and passing by reference  
(E) Define Abstract class.

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

- (A) Explain the difference between automatic variable, external variables and static variables with respect to their lifetime and scope [2]  
(B) List the benefits of Object oriented programming language over procedural language [4]  
(C) Create a base class called 'SHAPE' having two data members of type double. Member function `get-data( )` to initialize base class data members and pure virtual member function `display-area( )` to compute and display the area of the geometrical object. Derive two specific classes 'TRIANGLE' and 'RECTANGLE' from the base class. Using these three classes design a program that will accept dimension of a triangle / rectangle interactively and display the area. [6]

**OR**

- (C) What is overriding. How it is different from overloading. Explain overriding with an example [6]

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

- (A) What is difference between structure and a class. [2]  
(B) Write a program using pointer to order two numbers in ascending order. [4]  
(C) Overload “==” operator to compare two strings [6]

**OR**

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

- (A) What is difference between multiple and multilevel inheritance [2]  
(B) Write a program to read contents of a file and display it on console. [4]  
(C) Create a class ‘COMPLEX’ to hold a complex number. Write a friend function to add two complex numbers. Write a main function to add two COMPLEX objects. [6]

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