



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

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

<b>Examination</b>	<b>: First Sessional</b>	<b>Seat No.</b>	<b>: _____</b>
<b>Date</b>	<b>: 3/08/2016</b>	<b>Day</b>	<b>: Wednesday</b>
<b>Time</b>	<b>: 09:30 to 10:45</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 if any, correct them and show the output:** [08]

```
1) #include<iostream.h>                2)
   class Counter{                       void main()
   int ID;                               {
   Counter(int i)                        int y = 5,x;
   { ID=i                               x=(++y) + (++y) + (y++) + (y++) + (y++) ;
   cout<<ID<<" is created";           cout>>endl>>x<<" : "<<y;
   }                                    }
   ~Counter()
   {cout<<ID<<" is destroyed";}
}
void main()
{
{Counter a[2]={Counter(1), Counetr(2)};}
  Counetr c=Counter(3);
}
3) main()                               4)int i=10;
{                                       void main()
  int i = 10;                           {
  int& j = i;                           int j = 20;
  cout<<i<<" , "<<j<<endl;             cout<<j<<" : "<<::i;
  j = 20;                               {
  cout<<i<<" , "<<j<<endl;               int j = 30;
  i++;                                  cout<<j<<" : "<<:i;
  cout<<i<<" , "<<j<<endl;               }
}                                       cout<<j<<" : "<<:i;
}                                       }
```

**(B) State true or false with justification:** [02]

- (1) Executing continue operator from within a loop causes control to go to the start of main function.
- (2) In a class you can have more than one constructor with the same name.

**(C) What is the difference between *cin* and *getline()* function?** [02]

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

- (A) What is enumerated data type? When it should be used. [2]
- (B) What is difference between if – else statement and switch statement. Explain giving example of both [4]
- (C) Create a class complex with real and imaginary part as data members. Define the member functions to set the complex parameters by programmer, get the parameters by user, add two complex numbers and display the addition. [6]

**OR**

- (C) Create a structure distance with feet and inches as data members. Create a class Room with data length, width and height of type distance. Class should contain getdata() function to take values from user and calvol() to calculate the volume of room and display it. [6]

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

- (A) Define the term “data hiding” and “encapsulation” [2]
- (B) What is difference between pass by value and pass by reference. [4]
- (C) Write a program to find run time average of numbers entered by user. For eg: [6]  
N      Avg  
10     10  
20     15  
30     20

**OR**

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

- (A) What is Library function? How it is different from normal function. [2]
- (B) Describe function overloading with example. [4]
- (C) Create a class tollbooth with data members to hold total number of cars and amount collected from cars. Every car which passes the toll has to pay 100rs. Define member function as paycar() which tracks number of cars passed as well as amount collected by those cars, display() function to display relevant details. Also include constructor and destructor. [6]

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