



Examination : Second Sessional Seat No. : _____
Date : 03/09/2014 Day : Wednesday
Time : 09:30 to 10:45 Max. Marks : 36

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 Answer the following: [12]

- (A) One argument constructor changes [2]
a) basic type to basic type
b) basic type to user defined type
c) user defined type to basic type
d) user defined type to user defined type
- (B) Compiler will generate error if we overload * operator for division. State true / false [2]
with justification
- (C) List the operators which cannot be overloaded [2]
- (D) What is containership. How it is different from inheritance [2]
- (E) Find out the errors in below code with reasons. [4]
- a) #include<iostream.h>
Class A
{ protected : int proa;
public: int puba; };
Class B:private A
{ protected: int prob;
public: int pub;
void show() {cout<<proa; } };
void main() { B b1;cout<<b1.puba;
b1.show();}

b) void main()
{
int a[4]={ 10,20,30,40},*p;
void *v; float *f;
p=&a; v=p;
for(int i=0;i<4;i++)
{
cout<<*v++<<endl; }
f=v;
}

Q.2 Answer the following: [12]

- (A) State the limitation of increment operator overloading. [2]
- (B) What is overriding. Explain it by taking example of stack with push() and pop() member functions [4]
- (C) Overload comparison operator (==) in order to compare two strings. [6]
- OR**
- (C) Overload '+' operator to add two time objects. Time should be specified in terms of hours and minutes. [6]

Q.3 Answer the following: [12]

- (A) What is inheritance. State its advantages. [2]
- (B) State the difference between visibility modes : public, private and protected [4]
- (C) Create a class **Vehicle** with data members name and wheel count. Derive two classes **Light_Motor** with data member speed_limit, and **Heavy_Motor** with data member load_capacity from it. From class **Heavy_Motor** derive two more classes: **Passenger** that stores sitting_capacity , standing capacity, and a class **Goods**. Use constructor to initialize the required values. Each class should contain **void show()** to display values of each object. [6]

OR

Q.3 Answer the following: [12]

- (A) Define the term "Abstract class" [2]
- (B) Differentiate between multiple, multilevel and hierarchical inheritance. [4]
- (C) Bank having two types of accounts namely **saving account** and **current account** derived from base class **Account** which stores customer name and account number. Only the savings account provides compound interest and withdrawal facilities. Savings account check for **minimum balance** at the time of withdrawal. Include necessary member functions in order to achieve following tasks: [6]
- i) Accept deposit from a customer and update the balance
 - ii) Display the balance
 - iii) Compute and deposit interest
 - iv) Permit withdrawal and update the balance
