AIRPORT SCHOOL, AHMEDABAD
HOLIDAY HOMEWORK 2018 – 19
CLASS: XII
SUBJECT: COMPUTER SCIENCE

Q.1 Will the following programs produce same output?

Program 1
```
# include<iostream.h>
# include<conio.h>
void main()
{
    int x,y=1;
    if((x=y)!=0)
    cout<<x<<" "<<y;
    getch();
}
```

Program 2
```
# include<iostream.h>
# include <conio.h>
void main()
{
    int x,y=0;
    if((x=y=1)==1)
    cout<<x<<" "<<y;
    getch();
}
```

Q.2   What is the difference between the constructor and normal function?

Q.3   Find out errors in the following program: -

```
class number
    {
    int x=10;
    float y;
    number(){ x=y=10;}
    public:
    number(number t)
    {
        x=t.x; y=t.y;
    }
    ~ (){ cout<<"Object destroyed ";}
    }
    main()
    {
    number a1, a2(a1);
    }
```

Q.4   What is the difference between nesting or containership and inheritance? Explain with example?

Q.5   Class testmeout

```
{ int rollno;
public:
~testmeout()                                          //Function 1
{   cout<<rollno<<" is Leaving examination hall"<<endl;}
testmeout() //Function 2
{   rollno=1;
cout<<rollno<<" is appearing for examination "<<endl;
```

```
        }
        testmeout(int n, char name[])                    //Function 3
        {    rollno=n;
        cout<<name<<" is in examination hall"<<endl;
        }
        testmeout(testmeout & t);                        //function 4
        void mywork()                                    //Function 5
        {    cout<<rollno<<" is attempting questions "<<endl;}
        };
```

i)   In object oriented programming, what is Function 1 referred as and when does it get invoked?
ii) In object oriented programming, what is Function 2 referred as and when does it get invoked?
iii) In object oriented programming, what is Function 3 referred as and when does it get invoked?
iv) Write a statement so that function 3 gets executed?
v)   Complete the definition of function 4
vi) What will be the output of the above code if its main function definition is as given below (assumed the
     definition of Function 4 is completed):

```
main ()
{    testmeout ob1;
ob1.mywork();
}
```

vii) Which feature of object oriented programming is demonstrated using Function 2, Function 3 and Function 4 in the above class testmeout?
viii) What is the scope of data member (rollno) of class testmeout? What does the scope of data members depend upon?

Q.6   Write a function showfile() to read all the records present in an already exiting binary file **SPEED.DAT** and display them on the screen, also count the number of records present in the file.

Q.7   Write a C++ program, which initializes a string variable to the content. "Time is a great teacher but unfortunately it kills all its pupils Berlioz" and output the string one character at a time to the disk file **OUT.TXT**
You have to include all the header files required.

Q.8   Write a program that display the size of a file in bytes.

Q.9   What will be the output of the following prograM?

```
#include<stdlib.h>
#include<iostream.h>
#include<string.h>
void main()
    {
    randomize();
    char P[]="C++PROGRAM"; long L;
    for(int I=0;P[I]!='R';I++)
    {L=random (sizeof(L)) +5; cout<<P[L]<<"-";}}
}
```

(i) R-P-O-R-   (ii) P-O-R-+-   (iii) O-R-A-G-   (iv) A-G-R-M-

Q.10 How encapsulation and abstraction are implemented in C++ language? Explain with an example

Q.11 Answer the questions (i) and (ii) after going through the following C++ class
class Stream
```
    {    intStreamCode ; char Streamname[20];float fees;
    public:
    Stream( )                                        //Function 1
```

```
{    StreamCode=1;strcpy   (Streamname,"DELHI");
     fees=1000;}
void display (float C)                                    //Function 2
{    cout<<StreamCode<<":"<<Streamname<<":"<<fees<<endl;}
~Stream( )   //Function 3
{cout<<"End of Stream Object"<<endl;}
Stream (intSC,char S[ ],float F)  ;                       //Function 4
};
```

1. In Object Oriented Programming, what are Function 1 and Function 4 combined together referred as? Write function. definition of function 4.
2. What is the difference between the following statements?
3. Stream S (11," Science",8700); Stream S=Stream (11," Science",8700);

Q.12 Define a class Customer with the following specifications.

Private Members :
Customer_nointegerCustomer_name char (20)
Qtyinteger,Price, TotalPrice, Discount, Netprice float
Member Functions:
Public members:
1. A constructer to assign initial values of Customer_no as 111, Customer_name as "Leena", Quantity as 0 and Price, Discount and Netprice as 0.
2. Input( ) – to read data members(Customer_no, Customer_name, Quantity and Price) call Caldiscount().
3. Caldiscount ( ) – To calculate Discount according to TotalPrice and NetPrice. (TotalPrice = Price*Qty)

    TotalPrice>=50000 – Discount 25% of TotalPrice
    TotalPrice>=25000 and TotalPrice<50000 - Discount 15% of TotalPrice
    TotalPrice<250000 –Discount 10% of TotalPrice
    Netprice =   TotalPrice-Discount
4. Show( ) – to display Customer details.

Q.13 Answer the questions (i) to (iv) based on the following code: **[4]**

```
class AC
{    char Model [10]; char Date_of_purchase[10]; char Company[20];
     public:
     AC( );
     voidentercardetail( ); void showcardetail( );
};
class Accessories: protected AC
{    protected:
     char Stabilizer[30]; char AC_cover[20];
     public:
     float Price; Accessories();
     voidenteraccessoriesdetails( ); void showaccessoriesdetails( );
};
class Dealer : public Accessories
{
     intNo_of_dealers;
     chardealers_name[20]; intNo_of_products;
     public:
     Dealer( );
     voidenterdetails( ); void showdetails( );
};
```

(1) How many bytes will be required by an object of class Dealer and class Accessories?

(2) Which type of inheritance is illustrated in the above c++ code? Write the base class and derived class name of class Accessories.

(3) Write names of all the members which are accessible from the objects of class Dealer.

(4) Write names of all the members accessible from member functions of class Dealer.

Q.14 What do you understand by Data Encapsulation and Data Hiding? Also, give suitable C++ code to illustrate both.

Q.15 What do you understand by Polymorphism? Give a suitable example of the same.

Q.16 What do you mean by visibility modes? What is their effect on inheritance?