INTERNATIONAL INDIAN SCHOOL RIYADH

WORKSHEET

CLASS-XII

Q1.Name the header file(s) that shall be needed for the following code :

```
void main()
{
        char Text[]=”Computer Science”;
        cout<<setw(20)<<Text;
}
```

Q2.Rewrite the following C++ program code after removing the syntax error(s) (if any) . Underline each correction.

```
#include<iostream.h>
class Product
{
        char P_name[20];
        float Rate;
        Product()
        {
                strcpy(P_Name,"Sheet");
                        Rate=450;
        }
public:
        void Display()
        {
                cout<<P_Name<<":"<<Rate<<endl;
        }
};
void main()
{
        Product P;
        Display.P();
}
```

Q3.Find the output of the following program code :

```
#include<iostream.h>
struct Box
{
        int Len, Bre, Hei;
};
void Measure(Box B)
{
        cout<<B.Len<<":"<<B.Bre<<":";
        cout<<B.Hei<<endl;
}
```

```
void main()
{
        Box B1={10,20,30},B2,B3;
        ++B1.Hei;
        Measure(B1);
        B2=B1;
        ++B2.Len;
        B2.Bre++;
        Measure(B2);
        B3=B2;
        B3.Hei+=5;
        B3.Len-=2;
        Measure(B3);
}
```

Q4.Find the output of the following program code:

```
#include<iostream.h>
#include<ctype.h>
void  Mycode(char Msg[], char ch)
{
        for(int  I=0;Msg[I]!='\0';I++)
        {
                if((Msg[I]>='B')&&(Msg[I]<='G'))
                        Msg[I]=tolower(Msg[I]);
                else
                        if((Msg[I]=='A')||(Msg[I]=='a'))
                                Msg[I]=ch;
                        else
                                if(I%2==0)
                                        Msg[I]=toupper(Msg[I]);
                                else
                                        Msg[I]=Msg[I-1];
        }
}
void  main()
{
        char Mytext[]="HyPERActiVE";
        Mycode(Mytext,'@');
        cout<<"Changed Text is : "<<Mytext<<endl;
}
```

Q5.Study the following program and select the possible output from it . Justify your answer.

```
#include<iostream.h>
#include<stdlib.h>
const int first=25;
```

```
void main()
{
        randomize();
        int last=5,mid;
        for(int cnt=1;cnt<=4;cnt++)
        {
                mid=first+random(last);
                cout<<mid<<"*";
                last--;
        }
}
```

i. 29*26*25*28*
ii. 24*28*25*26*
iii. 29*26*24*28*
iv. 29*26*25*26*

Q6.Define a class ITEM in C++ with the following description :
Private members :
*ICode of type integer(Item Code)
*Item of type string(Item name)
*Price of type float(Price of each item)
*Qty of type integer(Quantity in stock)
*Discount of type float (Discount percentage on the item)
*A member function Disc() to calculate discount as per the following rule :
If Qty=50 Discount is 0
If 50<Qty<=100 Discount is 5%
If Qty>100 Discount is 10%
Public members:
*A constructor to assign initial values of Item with the word “NOT ASSIGNED” and other members as 0;
*A function Purchase() to allow the user to enter values for ICode , Item, Price, Qty and call function Disc() to calculate the discount.
*A function View() to allow the user to view the content of all the data members.

Q7.Consider the following and answer the questions that follow:

```
class CEO
{
        double Turnover;
protected:
        int Noofcomp;
public:
        CEO();
        void input(int);
        void output();
};
class Director:public CEO
{
        int noofemp;
```

```
public:
        Director();
        void INDATA();
        void OUTDATA();
protected:
        float funds;
};
class Manager:protected  Director
{
        float expenses;
public:
        void Display(void);
};
```

1. Which constructor will be called first at the time of declaration of object of class Manager?
2. How many bytes will an object belonging to the class Manager require?
3. Name the member functions thet can be accessed by an object of class Manager?
4. Is the member function output() accessible by the objects of class Director?

Q8.Given a binary file named SPORT.DAT containing records of the following structure type.

```
struct  Sport
{
        char  SportName[20];
        char Participant[10][30];
};
```

Write a function in C++ that would read contents from the file SPORT.DAT and creates a file named FOOT.DAT copying only those records from SPORT.DAT when the game name is “Foot Ball”.

Q9. An array A[40][50] is stored in the memory along the row with each element occupying 4 bytes. Find out the base address and address of the element A[10][40] , if the element A[5][20] is stored at the address 5500 .

Q10. Write a function change() in C++ , which accepts an array of integers and its size as parameters and divide all those array elements by 10 which are divisible by 10 and multiply other array elements by 2.

Sample input:

A[0]	A[1]	A[2]	A[3]	A[4]
10	6	15	30	12

Sample output:

A[0]	A[1]	A[2]	A[3]	A[4]
1	12	30	3	24

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IX – XII Girls