DELHI PUBLIC SCHOOL JAMMU
Assignment Half Yearly (2019)

CLASS: XII
SUBJECT : COMPUTER SCIENCE
Q 1 WHAT WIIL BE OUTPUT OF FOLLOWING PROGRAM?

```
#include<iostream.h>
# include <conio.h>
void main()
{
clrscr();
int sum(int(*)(int),int);
int square(int);
int cube(int);
cout<<sum(square,4)<<endl;
cout<<sum(cube,4)<<endl;
getch();
}
int sum(int(*ptr)(int k),int n)
{
int s=0;
for(int i=1;i<=n;i++)
        {
        s+=(*ptr)(i);
        }
        return s;
}
int square(int k)
{ int sq;
sq=k*k;
return k*k;
}
int cube(int k)
{
return k*k*k;
}
```

Q2.How many times will the following program will print "examination"?

```
#include<iostream.h>

void main( )

{

        while(1)

        {

                cout<<"examination"

        }
```

}

Q 3. 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();
}
```

Q4. What would be contents of following after array initialization?

int   A[5]={3,8 ,9}

Q5. Suggest storage class for following variables

1. a normal variable.
2. very heavily used variable.
3. a variable that should retain its value after function is over.
4. a variable that spanes multiple files.
5. a variable global in one & not available in another file.

Q6. What is the difference between the constructor and normal function?
Q7. What is the similarity between class and the constructor?
Q8. Find the output of the following program?

```
#include<iostream.h>
#include<conio.h>
#include<string.h>
class state
{ char *statename;
 int size;
 public:
 state(){size=0;statename=new char[size+1];}
 state (char *s)
 { size=strlen(s);statename=new char[size+1];
  strcpy(statename,s);
```

```
        }
        void display()
       { cout<<statename<<endl;}
        void replace(state&a, state &b)
        {size=a.size+b.size;
         delete statename;
         statename=new char[size+1];
         strcpy(statename, a.statename);
         strcat(statename,b.statename);
        }
       };
       void main()
       { clrscr();
        char *temp="Delhi";
        state state1(temp), state2("Mumbai"), state3("Nagpur"), s1,s2;
        s1.replace(state1,state2);
        s2.replace(s1,state3);
        s1.display();
        s2.display();
        getch();
       }
```

Q9. 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.10 What is the difference between nesting or containership and inheritance? Explain with example?

Q.11 What will be the output of the program?

```
        #include<iostream.h>
class base
{ public:
    void display()
    {
cout<<"It is a base class "<<endl;
}
};
class derived: public base
{
public:
        void display()
        { cout<<"It is a derived class "<<endl;}
        };
Main ()
{
derived ob1;
    ob1.display();
}
```

Q.12. Define a class named Admission in C++ with following description?   4
Private members:
admno   integer (Ranges 10-1500)
name   string of 20 characters
cls   integer
fees   float
Public members:
A constructor which initialized admno with 10, name with "NULL", cls with 0 & fees with 0
Function getdata() to read the object of Admission type.
Function putdata() to print the details of object of admission type.
Function draw_nos() to generate the admission no. randomly to match with admno and display the detail of object.
Q13.   State the distributive laws of boolean algebra.
        Distributive laws states:

    (i) X(Y+Z)=XY+XZ

    (ii) X+YZ=(X+Y)(X+Z)

Q14. **Reduce the following Boolean expression using K-Map:**

$$F(P,Q,R,S)=\Sigma(0,3,5,6,7,11,12,15)$$

Q.15 What is protocol? How many types of protocols are there?

Q16. What is the difference between Networking and Remote Networking?

Q17. What is point-to-point protocol?

Q18. How gateway is different from router?

Q19. What is the role of network administrator?

Q20. What is the difference between baseband and broadband transmission?