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HOLIDAY HOME WORK- COMPUTER SCIENCE

1. WAP to display the following pattern using nested for loop:

```
*  
***  
*****
```

2. WAP to display the following pattern using nested for loop:

```
*****  
***  
*
```

3. Write the output of the following program:

```
#include<iostream.h>  
void Execute( int &B, int C=100)  
{  
    int Temp = B + C ;  
    B += Temp ;  
    if( C == 100 )  
        cout << Temp << B << C << endl ;  
}  
void main( )  
{  
    int M = 90, N = 10;  
    Execute (M) ;  
    cout<< M<<N<<endl;  
    Execute(M,N);  
    cout<<M<<N<<endl;  
}
```

4. Give the output of the following program segment:

```
void main( )  
{  
    char *Name = "CoM-PutER";  
    for(int x=0;x<strlen(Name);x++)  
        if(islower(Name[x]))  
            Name[x]=toupper(Name[x]);  
        else if(isupper(Name[x]))  
            Name[x]=tolower(Name[x]);  
        else  
            Name[x]=Name[x-1];  
    puts(Name);  
}
```

5. Find the output of the following program:

```
#include<iostream.h>
struct Play
{ int score,bonus; };
void calculate(Play &p, int N=10)
{ p.score++; p.bonus+=N; }
void main()
{ Play pl={10,15};
  calculate(pl,5);
  cout<<pl.score<<":"<<pl.bonus<<endl;
  calculate(pl);
  cout<<pl.score<<":"<<pl.bonus<<endl;
  calculate(pl,15);
  cout<<pl.score<<":"<<pl.bonus<<endl;
}
```

6. Find the output of the following program(assuming the required header files are included):

```
void Encrypt(char T[])
{ for(int i=0;T[i]!='\0';i+=2)
  if(T[i]=='A' || T[i]=='E')
    T[i]='#';
  else if(islower(T[i]))
    T[i]=toupper(T[i]);
  else
    T[i]='@';
}
void main()
{ char Text[]="SaVE EArth"; //the two words in the string Test are
                             separated by single space//
  Encrypt(Text) ;
  cout<<Text<<endl;
}
```

7. In the following program, if the value of N given by the user is 15, what maximum and minimum values the program could possibly display?(Assuming the required header files are included)

```

void main()
{
    int N, Guessme;
    randomize();
    cin>>N;
    Guessme=randum(N)+10;
    cout<<Guessme<<endl;
}

```

8. How many times the following loop will execute? Give proper reason for your answer:

```

int m=10;
while(m>=0)
{
    m=50/m;
    cout<<"m= "<<m<<endl;
}

```

9. Rewrite the following code using for loop:

```

int i=99;
while(i>=0)
{
    cout<<"half of this is: "<<i<<endl;
    i=i/2;
}

```

10. Rewrite the following code using switch-case:

```

if(day==1)
    cout<<"Sunday";
else if(day==2)
    cout<<"Monday";
else if(day==3)
    cout<<"Tuesday";
else
    cout<<"Invalid Day";

```

11. What will be the values of a and b after this expression is evaluated. Initial values Of a & b is 10:

```

b = ++a + a++;

```

12. What is a pointer? Declare a pointer of int type?

13. Rewrite the following code after correcting the errors. Underline each correction made:

```
#include<iostream.h>
void main()
{  const int no ;
   no=5;
   int rollno[no];
   int class[no];
   for(i=0;i<no;i++)
   {  cout<<"Enter class: " ; cin << clas[i] ;
      cout<<"Enter Roll No: " ; cin >> rollno ;
   }
}
```

14. In the following C++ program(assuming the required header files are included) what is the expected value of MyMarks from options (i) to (iv) given below. Justify your answer.

```
void main()
{  randomize();
   int Marks[]={99,92,94,96,93,95}, MyMarks;
   MyMarks= Marks[1+ random(2)] ;
   cout<< MyMarks<<endl;
}
```

(i) 99 (ii) 94 (iii) 96 (iv) None of the above.