DFS Lab – Surprise Test

Name:
Roll Number:

++

Select the correct o/p of the following programs (without execution) and state reasons:

1.
```
# define x - -5
int main(){
        printf ("%d", x);
        return 0;
}
```
i) -5, ii) 5, iii) 4, iv) Error.

2.
```
#define sqr(n) ++n * ++n
int main(){
        int x = 3, y;
        y = ++x * ++x; // The precedence of increment is higher than multiplication
        x -= 3;
        printf ("%d %d", sqr(x), y);
        return 0;
}
```
i) 16 16, ii) 25 25, iii) 16 25, iv) 25 16.

3.
```
char subject[20] = "DFS" "LAB" “2019”;
printf (subject);
```
i) DFS, ii) 2019, iii) DFS LAB 2019, iv) DFSLAB2019.

4.
```
char name[20];
scanf("%*s %s", name); // Let the input be “Tim Berners-Lee”
printf ("%s", name);
```
i) Tim, ii) Berners-Lee, iii) Tim Berners-Lee, iv) Lee.

5.
```
#define fun(x) (sizeof (x) / sizeof (*x))
int main(){
        int digit[10] = {0, 1, 2, 3, 4, 5, 6, 7, 8, 9};
        char *str[20] = {"aa", "ab", "ac", "ad", "ae", "af", "ag", "ah", "ai", "aj"};
        printf ("%d %d\n", fun(digit), fun(str));
        return 0;
}
```
i) 1 1, ii) 10 10, iii) 10 20, iv) None.

6.
```
int i = 2^3;
printf (“%d”,i);
```
i) 0, ii) 1, iii) 8, iv) 9.

7.
```
if(-~-1)
        printf ("Santa");
if((~7 & 0x000f) == 8)
        printf ("Banta");
printf (“*”);
```
i) Santa*, ii) Banta*, iii) SantaBanta*, iv) *.

8.
```
int a = 2;
if(a >> 1)
        printf ("Value = %d", a);
```
i) Value = 0, ii) Value = 1, iii) Value = 2, iv) Value =.

9.
```
int a = 5, b = 10;
a ^= b ^= a ^= b;
printf("%d %d", a, b);
```
i) 5 10, ii) 10 5, iii) 5 5, iv) 10 10.

10.
```
int i = 2, j = 2;
while(i+1 ? --i : j++)
        printf("%d", i);
```
i) 1, ii) 2, iii) 3, iv) Error.

11.
```
int x = 3, y = 5;
printf("%d", (x+y)++);
```
i) 8, ii) 9, iii) 10, iv) Error.

12.
```
printf (“Brouhaha”+21/4-1);
```
i) haha, ii) a, iii) Brouhaha, iv) Error.

13.
```
int var[][3] = {1, 2, 3, 4, 5, 6};
int (*ptr)[3] = var;
printf ("%d %d ", (*ptr)[1], (*ptr)[2]);
++ptr;
printf ("%d %d", (*ptr)[1], (*ptr)[2]);
```
i) 2 3 3 4, ii) 2 3 4 5, iii) 2 3 5 6, iv) Error.

14.
```
int num = 16;
if((num & (num - 1)) == 0)
        printf(“Yes”);
else
        printf(“No”);
```
i) Yes, ii) No, iii) YesNo, iv) Error.

15.
```
int a = 3, b = 8;
(a & b) ? printf("True") : printf("False");
```
i) True, ii) False, iii) Error, iv) None.

16.
```
long int i = 1; // A long integer consumes 8 bytes of memory
printf (“%lu”, -sizeof(i));
```
i) 8, ii) -8, iii) -1, iv) None.

17.
```
int (*ptr)[20][30];
printf ("%lu", sizeof(*ptr)); // An integer consumes 4 bytes of memory
```
i) 4, ii) 600, iii) 2400, iv) None.

18.
```
printf (“%d”, printf (“%d”, printf (“%d”, printf (“%s”, “CisSOfunny”))));
```
i) CisSOfunny, ii) 1210 CisSOfunny, iii) CisSOfunny1021, iv) Error.

19.
```
static int a[ ] = {0, 1, 2, 3, 4};
static int *p[ ] = {a, a+1, a+2, a+3, a+4};
int **ptr = p;
ptr++, printf ("%d", **ptr);
*ptr++, printf ("%d", **ptr);
++*ptr, printf ("%d", **ptr);
*++ptr, printf ("%d", **ptr);
```
i) 1234, ii) 1223, iii) 1222, iv) 1233.

20.
```
int num = 5;
while(num --> 0)
        printf("%d ", num);
```
i) 5 4 3 2 1, ii) 4 3 2 1, iii) 4 3 2 1 0, iv) Error.