

CS & IT ENGINEERING

C-Programming

Function & Storage Class
Discussion Notes

DPP.- 01



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#Q. Consider the following program:

```
#include<stdio.h>
int f2(int a){
    int b=0;      b = 0
    b=b+5;      b = b+5 = 5
    return a*b;
}          25
int f1(int a){      a = 5
    int b;
    b=f2(a);      b = f2(a)
    b : 25      5
    return a*b;
}
```

```
int main(){
    int i, a=5, b=4;
    for(i=0;i<2;i++){
        b-=f1(a)-f2(a);
        printf("%d\t", b);
    }
    return 0;
}
```

$$\begin{array}{ll}
 a \boxed{5} & 6 \boxed{4} \\
 & -96 \\
 i = 0 & -196 \\
 i = 1 & \boxed{-292}
 \end{array}$$

$$b = b - (f_1(a) - f_2(a))$$

The sum of the printed values is -292

$$\begin{aligned}
 & -96 - (125 - 25) \\
 & -96 - 100 = -196
 \end{aligned}$$

#Q. Consider the following program:

```
#include<stdio.h>

int f2(int a){
    int b=0;
    b=b+5;
    return a*b;
}

int f1(int a){
    int b;
    b=f2(a);
    return a*b;
}
```

[MCQ]



#Q. Consider the following program:

```
#include<stdio.h>
void print(int n){
    for(n++;n++;n++)
        printf("GATE Wallah");
}
int main(){
    void print(); ✓
    void print(); ✓
    print(-9);
    return 0;
}
```

Which of the following is correct?

n++; }
while (n++) {
 printf("Gate wallah").
 n++; }
}

-8 -7 -6 -5 -4
1 w
-3 -2
-1 w
1 2 3 4

A

Compilation error

B

“GATE Wallah” will be printed infinite number of times.

C

“GATE Wallah” will be printed 5 times.

D

“GATE Wallah” will be printed 4 times.

[MCQ]



#Q. Consider the following program.

```
#include<stdio.h>
void f(int n){          (n = 1)
    switch(n<<1+n){
        default: printf("Sresth");
        case 4: printf("Parakram");
        case 3: printf("2024");
        break;
        case 2: printf("2025");
    }
}
int main(){
    f(1);
    return 0;
}
```

The output is-

$$n << 1 + 1 \\ 1 << 2 = 1 \times 2^2 = 4$$

A Parakram2024

B SresthParakram2024

C Parakram

D Sresth2025

#Q. Consider the following program:

```
#include<stdio.h>
int f(int b, int a){
    int x;1 2
    x=a<<b;
    b=x*a--;
    return a+b-x;
}
int main(){
    printf("%d", f(1,2));
    return 0;
}
```

The value printed is 5.

$$f(1,2) \quad x \boxed{4} \quad a \boxed{2} \boxed{1}$$

$$x = 2 \ll 1 = 2 \times 2^1 = 4$$

$$b = 4 * 2 = 8$$

$$1 + 8 - 4 = 5$$

[MCQ]



#Q. Consider the following program:

```
#include <stdio.h>
int r(int num){
    return --num;
}
int main(){
    int n=4;
    for (r(n);r(n++);r(--n))
        printf("%d\t",r(--n));
    return 0;
}
```

The output is-

3, 2, 1

W ~~5 - 14 + 3 / W~~, ~~3 X W~~ ~~3 X W~~ ~~12~~

$\tau(n)$ O
while ($\tau(n++)$) {
 printf("%d", $\tau(--n)$);
 $\tau(--n)$;
}

A 1 2 3

B 1 2 3 4

C 3 2 1

D 4 3 2 1

3 2 1



THANK - YOU