

C-Lab-Day-8

c-language-mcq's

Q-1 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>

int main() {
    if(printf("Hey ")) {
        printf("Hello ");
    }
    printf("Hi");
    return 0;
}
```

Output :- Hey Hello Hi

Q-2 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>

int main() {
    if(printf("")) {
        printf("Hello ");
    }
    printf("Hi");
    return 0;
}
```

Output :-Hi

Q-3 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    if(printf(" ")) {  
        printf("Hello ");  
    }  
    printf("Hi");  
    return 0;  
}
```

Output :-Hello Hi

Q-4 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    printf("%d",printf("Hello"));  
    return 0;  
}
```

Output :- Hello5

Q-5 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    printf("%d",printf("%d",10));  
    return 0;  
}
```

Output :- 102

Q-6 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    int val;  
    printf("Enter a Value ");  
    printf("%d",scanf("%d",&val));  
    printf("\nThe value of Val is %d ",val);  
}
```

```
    return 0;
}
```

Output :-Enter a Value 3

1

The Value of val is 3

Q-7 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {
    int val1, val2;
    printf("Enter a Two Values ");
    printf("%d",scanf("%d%d",&val1,&val2));
    printf("\nThe value of Val1 and Val2 are %d %d",val1,val2);
    return 0;
}
```

Output :-Enter a Two Values 1

2

2

The value of Val1 and Val2 are 1 2

Q-8 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    int a = 10, b = 20, c = 30;  
    printf("%d",printf("%d%d%d",a, b, c));  
    return 0;  
}
```

Output :- 1020306

Q-9 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    int val = 0;  
    printf("Enter a value ");  
    if(scanf("%d",&val)){  
        printf("Hello ");  
    }  
    printf("The value is %d",val);  
    return 0;  
}
```

Output :-Enter a value 3

Hello The value is 3

Q-10 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    printf("%d",printf(""));  
    return 0;  
}
```

Output :- 0

Q-11 :- [ok]

```
#include <stdio.h>
```

```
int main() {  
    int a = 10;  
    printf("%d",if(a>5){  
        printf("a is big");  
    });  
    return 0;
```

```
}
```

Output :- Error

```
5 | printf("%d",if(a>5){  
  |                               ^~  
-----
```

Q-12 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    int a = 10, b = 30, c = 20;  
    printf("%d is big", (a > b) ? ((a > c) ? a : c) : ((b > c) ? b : c));  
    return 0;  
}
```

Output :- 30 is big

Q-13 :- [ok]

What will be the output of the below c program snippet?

```
int x = -5;  
if (x) {  
    printf("True\n");
```

```
} else {  
    printf("False\n");  
}
```

- a) True
- b) False
- c) Compilation error
- d) Undefined behavior

Output :-a)True

Q-14 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>
```

```
int main() {  
    int a = 20, b = 20;  
    (a>b) ? printf("A is big %d ",a) : printf("B is big %d ",b);  
    return 0;  
}
```

Output :-B is big 20

Q-15 :- [ok]

What will be the output of the below c program snippet?

```
#include <stdio.h>

int main() {
    printf(printf("hi"));
    return 0;
}
```

Output :-Error

Programs

Program-1 :-

"Write a C program to find the largest number among three numbers using the ternary operator. Take input values using the scanf() function."

Sample-run

Test Case 1 :-

[Positive and Negative Values]

Input: a = 15, b = -8, c = 7

Expected Output: The largest number is 15

Test Case 2 :-

[All Values are Equal]

Input: a = 10, b = 10, c = 10

Expected Output: The largest number is 10

Test Case 3 :-

[Zeros and Positive Values]

Input: a = 0, b = 0, c = 5

Expected Output: The largest number is 5

Sol:

// Online C compiler to run C program online

```
#include <stdio.h>
```

```
int main() {  
    int a,b,c;  
    printf("a=");  
    scanf("%d",&a);  
    printf("b=");  
    scanf("%d",&b);  
    printf("c=");  
    scanf("%d",&c);  
    printf("The largest number is %d",(a>b)?((a>c)?a:c):((b>c)?b:c));  
  
    return 0;  
}
```

Program-2 :-

Write a C program to find the sum and average of a student's marks in five subjects. The program should take the marks as input, calculate the sum and percentage, and then print both the sum and percentage using an if statement?

Note :-

Add validation to ensure that marks are non-negative.

Sample-run

Test Case-1 :-

- > Input: 80, 70, 90, 85, 75
- > Expected Output:
- > Sum of marks: 400
- > Percentage: 80.00%
- > Result: "The student has passed."

Test Case-2 :-

- > Input: 50, 45, 55, 60, 40
- > Expected Output:
- > Sum of marks: 250
- > Percentage: 50.00%
- > Result: "The student has passed."

Test Case-3 :-

- > Input: 30, 40, 35, 25, 45
- > Expected Output:
- > Sum of marks: 175
- > Percentage: 35.00%
- > Result: "The student has failed."

Test Case 4 :-

- > Negative Marks (Invalid Input)
- > Input: 80, -10, 90, 85, 75
- > Error: "Invalid input: Marks cannot be negative."

Sol:

Using Marks:

// Online C compiler to run C program online

#include <stdio.h>

```
int main() {
    int s1,s2,s3,s4,s5,sum;
    float percent;
    printf("Input:");
    scanf("%d%d%d%d%d",&s1,&s2,&s3,&s4,&s5);
    printf("Expected output:\n");
    if(s1>=0 && s2>=0 && s3>=0 && s4>=0 && s5>=0)
    {
        sum=s1+s2+s3+s4+s5;
        printf("Sum of marks:%d\n",sum);
    }
}
```

```
percent=sum*100/500;
printf("Percentage:%.4f%\n",percent);
if(sum>175) puts("The student has passed");
else puts("The student has failed");
}
else puts("Invalid");

return 0;
}
```