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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Problem Solving Through Programming In C (course)



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### Course outline

How does an NPTEL online course work? ()

Week 0 : ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

Week 6 ()

Week 7 ()

Week 8 ()

## Week 8 : Assignment 8

The due date for submitting this assignment has passed.

Due on 2023-09-20, 23:59 IST.

Assignment submitted on 2023-09-20, 20:47 IST

1) A function prototype is used for

1 point

- ☐ a) Declaring the function logic
- ☐ b) Calling the function from the main body
- ☒ c) Telling the compiler, the kind of arguments used in the function
- ☐ d) Telling the user for proper use of syntax while calling the function

Yes, the answer is correct.

Score: 1

Accepted Answers:

c) *Telling the compiler, the kind of arguments used in the function*

2) What is the default return type if it is not specified in function definition?

1 point

- ☐ a) void
- ☒ b) integer
- ☐ c) double
- ☐ d) float

Yes, the answer is correct.

Score: 1

Accepted Answers:

b) *integer*



[Week 9 \(\)](#)[Week 10 \(\)](#)[Week 11 \(\)](#)[Week 12 \(\)](#)[DOWNLOAD  
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Transcripts \(\)](#)[Problem  
Solving  
Session -  
July 2023 \(\)](#)

3)

What will be the output?

```
#include <stdio.h>
int main()
{
    {
        int a = 70;
    }
    printf("%d", a);
    return 0;
}
```

- ☐ a) 70
- ☐ b) Garbage value
- ☒ c) Compilation error
- ☐ d) None

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
c) *Compilation error*

1 point

4)

How many times will 'Hello world' be printed?

```
#include<stdio.h>
int main()
{
    printf("Hello world\n");
    main();
    return 0;
}
```

- ☐ a) Infinite times
- ☐ b) 32767
- ☐ c) 65535
- ☒ d) Till stack overflows

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
d) *Till stack overflows*

1 point



5) How many times 'Hi' will be printed in the program given below

1 point

```
#include<stdio.h>
int i;
int fun();

int main()
{
    while(i)
    {
        fun();
        main();
    }
    printf("Hello\n");
    return 0;
}
int fun()
{
    printf("Hi");
}
```

- ☐ a) Only once
- ☒ b) Zero times
- ☐ c) Infinite times
- ☐ d) Compilation error

Yes, the answer is correct.  
Score: 1

Accepted Answers:

b) Zero times

6) How many times the function factorial will be executed?

```
#include<stdio.h>
int factorial(int);
int main()
{
    int n=5;
    long int f;
    f = factorial(n);
    printf("%d! = %ld\n", n, f);
    return 0;
}
int factorial(int n)
{
    if (n == 0)
        return 1;
    else
        return(n * factorial(n-1));
}
```

5



**Hint**

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Numeric) 6

**1 point**

7) What will be the output?

**1 point**

```
#include<stdio.h>
void func(int n, int sum)
{
    int k = 0, j = 0;
    if (n == 0) return;
        k = n % 10;
    j = n / 10;
    sum = sum + k;
    func (j, sum);
    printf ("%d,", k);
}

int main ()
{
    int a = 2048, sum = 0;
    func (a, sum);
    printf ("%d ", sum);
}
```

- ☐ a) 8 ,4, 0, 2, 14
- ☐ b) 8, 4, 0, 2, 0
- ☐ c) 2, 0, 4, 8, 14
- ☒ d) 2, 0, 4, 8, 0

Yes, the answer is correct.

Score: 1

Accepted Answers:

d) 2, 0, 4, 8, 0



8)

1 point

What is the output of the following C program?

```
#include <stdio.h>
int fun(int n)
{
    int i, j, sum = 0;
    for(i = 1; i <= n; i++)
        for(j = i; j <= i; j++)
            sum = sum + j;
    return(sum);
}
int main()
{
    printf("%d", fun(10));
    return 0;
}
```

- ☒ a) 55  
☐ b) 45  
☐ c) 66  
☐ d) 10

Yes, the answer is correct.

Score: 1

Accepted Answers:

a) 55

9)

1 point

Consider the function

```
int find(int x, int y)
{
    return((x < y) ? 0 : (x - y));
}
```

Let a and b be two non-negative integers. The call find(a, find(a, b)) can be used to find the

- ☐ a) Maximum of a, b  
☐ b) Positive difference between a and b  
☐ c) Sum of a and b  
☒ d) Minimum of a and b

Yes, the answer is correct.

Score: 1

Accepted Answers:

d) Minimum of a and b



10) What is the output of the C code given below

```
#include <stdio.h>
float func(float age[ ]);

int main()
{
    float result, age[] = { 23.4, 55, 22.6, 3, 40.5, 18 };
    result = func(age);
    printf("%0.2f", result);
    return 0;
}

float func(float age[ ])
{
    int i;
    float result, sum = 0.0;
    for (i = 0; i < 6; ++i) {
        sum += age[i];
    }
    result = (sum / 6);
    return result;
}
```

Hint

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
(Type: Numeric) 27.08

1 point

