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**NPTEL** (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Problem solving through Programming In C (course)**Announcements (announcements)    **About the Course** ([https://swayam.gov.in/nd1\\_noc20\\_cs06/preview](https://swayam.gov.in/nd1_noc20_cs06/preview))

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## Unit 14 - Week 12

### 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 9

Week 10

Week 11

Week 12

## Assignment 12

The due date for submitting this assignment has passed. **Due on 2020-04-22, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) Which of the following are themselves a collection of different data types? **1 point**

- ☐ a) String
- ☐ b) Array
- ☐ c) Character
- ☐ d) Structure

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*d) Structure*

☒ Lecture 56 :  
Structure  
(Contd.) (unit?  
unit=13&lesson=70)

☐ Lecture 57 :  
Structure with  
typedef (unit?  
unit=13&lesson=71)

☐ Lecture 58 :  
Pointer (unit?  
unit=13&lesson=72)

☐ Lecture 59 :  
Pointer (Contd.)  
(unit?  
unit=13&lesson=73)

☐ Lecture 60 :  
Pointer in  
Structures (unit?  
unit=13&lesson=74)

☐ Lecture 61 :  
Dynamic  
Allocation and  
File (unit?  
unit=13&lesson=75)

☐ **Quiz :**  
**Assignment 12**  
**(assessment?**  
**name=159)**

☐ Week-12  
Problem-01  
(/noc20\_cs06/progassignment  
name=177)

☐ Week-12  
Problem-02  
(/noc20\_cs06/progassignment  
name=178)

☐ Week-12  
Problem-03  
(/noc20\_cs06/progassignment  
name=179)

☐ Week-12  
Problem-04  
(/noc20\_cs06/progassignment  
name=180)

☐ Week-12  
Problem-05  
(/noc20\_cs06/progassignment  
name=181)

☐ Feedback For  
Week 12 (unit?  
unit=13&lesson=184)

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2) What is the output?

```
#include<stdio.h>
int main()
{
    struct xyz{ int a;};
    struct xyz obj1={11};
    struct xyz obj2 = obj1;
    printf("%d", obj2.a);
    obj2.a = 101;
    printf("%d", obj1.a);
    printf("%d", obj2.a);
    return 0;
}
```

- ☐ a) 1111011  
☐ b) 1111101  
☐ c) 1110111  
☐ d) 1110011

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*b) 1111101*

3) What will be output?

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
    int i;
    int *ptr = (int *) malloc(5 * sizeof(int));
    for (i=0; i<5; i++)
        *(ptr + i) = i;
    printf("%d ", *ptr++);
    printf("%d ", (*ptr)++);
    printf("%d ", *ptr);
    printf("%d ", *++ptr);
    printf("%d ", ++*ptr);
    return 0;
}
```

- ☐ a) Error

1 point

1 point

### Assignment Solution

- ☐ b) 0 1 2 3 4
- ☐ c) 1 2 3 4 5
- ☐ d) 0 1 2 2 3

No, the answer is incorrect.

Score: 0

Accepted Answers:

**d) 0 1 2 2 3**

4) What will be output?

1 point

```
#include <stdio.h>
int fun(int arr[]) {
    arr = arr+2;
    printf("%d ", arr[0]);
}
int main()
{
    int arr[3] = {7, 11, 19};
    fun(arr);
    printf("%d ", arr[0]);
    printf("%d ", arr[1]);
    return 0;
}
```

- ☐ a) 19 19 11
- ☐ b) 7 7 11
- ☐ c) 9 7 11
- ☐ d) 19 7 11

No, the answer is incorrect.

Score: 0

Accepted Answers:

**d) 19 7 11**

5)

1 point

What is the output of the following C code? Assume that the address of x is 2000 (in decimal) and an integer requires four bytes of memory

```
#include <stdio.h>
int main()
{
    unsigned int x[4][3] = {{1, 2, 3}, {4, 5, 6},
                           {7, 8, 9}, {10, 11, 12}};
    printf("%u, %u, %u", x+3, *(x+3), *(x+2)+3);
    return 0;
}
```

- ☐ a) 2036 2036 2036
- ☐ b) 2012 4 2204
- ☐ c) 2036 10 10
- ☐ d) 2012 4 6

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*a) 2036 2036 2036*

6) In which condition “Hello world!” will be printed?

1 point

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *ptr;
    ptr = (int *)malloc(sizeof(int)*10);
    if (ptr == NULL)
        printf("Hello world!\n");
    return 0;
}
```

- ☐ a) if the memory has been allocated to the pointer “ptr” successfully
- ☐ b) if the memory could not be allocated to the pointer “ptr”
- ☐ c) it will never print
- ☐ d) None

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*b) if the memory could not be allocated to the pointer “ptr”*

7) 1 point

The program will allocate .....bytes to ptr. Assume sizeof(int)=4.

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *ptr;
    ptr = (int*)malloc(sizeof(int)*4);
    ptr = realloc(ptr,sizeof(int)*2);
    return 0;
}
```

- ☐ a) 2
- ☐ b) 4
- ☐ c) 8
- ☐ d) None

No, the answer is incorrect.

Score: 0

Accepted Answers:

**c) 8**

8)

1 point

What does fp point to in the program?

```
#include<stdio.h>
int main()
{
    FILE *fp;
    fp=fopen("hello", "r");
    return 0;
}
```

- ☐ a) The first character in the file
- ☐ b) A structure which contains a char pointer which points to the first character of a file.
- ☐ c) The name of the file.
- ☐ d) The last character in the file

No, the answer is incorrect.

Score: 0

Accepted Answers:

*b) A structure which contains a char pointer which points to the first character of a file.*

9)

1 point

What is the output of the following C program?

```
#include <stdio.h>
int main()
{
    int *p, a=100;
    p=&100;
    printf("%d",*p);
    return 0;
}
```

- ☐ a) 10
- ☐ b) a
- ☐ c) address of a
- ☐ d) compilation error

No, the answer is incorrect.

Score: 0

Accepted Answers:

d) *compilation error*

<sup>10</sup> What is the output of the following C program?

1 point

```
#include <stdio.h>
struct p
{
    int x;
    char y;
};
int main()
{
    struct p p1[] = {1,21,69,42,64};
    struct p *ptr1 = p1;
    int x = (sizeof(p1) / 4);
    if (x == sizeof(int) + 2*sizeof(char))
        printf("True");
    else
        printf("False");
    return 0;
}
```

- ☐ a) True
- ☐ b) False
- ☐ c) No output
- ☐ d) Compilation error

No, the answer is incorrect.

Score: 0

Accepted Answers:

*a) True*

