

## C Sample Paper

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### Section A

1. How many times “Test” is get printed ?

```
#include<stdio.h>
int main()
{
    int x;
    for(x=-1; x<=10; x++)
    {
        if(x < 5)
            continue;
        else
            break;
        printf("Test ");
    }
    return 0;
}
```

- A. Infinite times
- B. 11 times
- C. 0 times
- D. 10 times

2. Which of the following is not logical operator ?

- A. &
- B. &&
- C. ||
- D. !

3. C programs are converted into machine language with the help of

- A. An Editor
- B. A compiler
- C. An operating system
- D. None of these.

4. A C variable cannot start with

- A. A number
- B. A special symbol other than underscore
- C. Both of the above
- D. An alphabet

5. Guess the output of the following program ?

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

```

int main()
{
    int a = 100, b = 200, c = 300;
    if(!a >= 500)
        b = 300;
    c = 400;
    printf("%d,%d,%d",a, b, c);
    return 0;
}

```

- A. 100,300,300
- B. 100,200,400
- C. 100,200,300
- D. 100,300,400

6. In the following loop construct, which one is executed only once always.

```
for ( exp1; exp2; exp3) { . . . }
```

- A. exp1
- B. exp3
- C. exp1 and exp3
- D. exp1, exp2 and exp3

7. What is the output of the following code?

```

#include<stdio.h>
int main()
{
    int i = 0;
    switch ( i)
    {
        case 0 : i++;
        case 1 : i++;
        case 2 : ++i;
    }
    printf("%d", i++);
    return 0;
}

```

- A. 1
- B. 3
- C. 4
- D. 5

8. Which of the following is the correct output for the program given below?

```

#include <stdio.h>
int main()
{
    int size,i;
    scanf("%d", &size);
    int arr[size];
    for(i=0; i < size; i++)
    {

```

```
scanf("%d", &arr[i]);
printf("%d", arr[i]);
}
return 0;
}
```

- A. The code is erroneous since the subscript for array used in for loop is in the range 0 to size.
- B. The code is erroneous since the values of array are getting scanned through a loop.
- C. The code is erroneous since the statement declaring array is invalid.
- D. The code is correct and runs successfully.

9. The compiler in C ignores all text till the end of line using

- A. //
- B. /
- C. \*/
- D. none of above

10. The && and || operators

- A. compare two numeric values
- B. combine two numeric values short hand operator, &
- C. compare two boolean values
- D. none of these

11. Consider the array definition

```
int num [10] = {3, 3, 3};
```

Pick the Correct answers

- A. num [9] is the last element of the array num
- B. The value of num [ 8 ] is 3
- C. The value of num [ 3 ] is 3
- D. None of the above

12. int x=10;

```
printf("%d",x++);     Output is:
```

- A. 10
- B. 11
- C. 12
- D. None of these

13. Which statement is wrong:

- A. A function may have arguments.
- B. A function may return value.
- C. A can be invoked many time in a single program.
- D. Function cannot be reused.

14. A function can return only \_\_\_\_\_

- A. Single value
- B. Two Values.
- C. Many values.
- D. None of these

15. A function which invokes itself repeatedly until some condition is satisfied is called a \_\_\_\_\_ function.

- A. Recursive
- B. System
- C. Library
- D. None of these

16. A pointer variable can store \_\_\_\_\_

- A. Constant value
- B. Value of another variable.
- C. Address of another variable
- D. None of these.

17. C is a \_\_\_\_\_ language:

- A. Object Oriented
- B. Structured
- C. Unified Modeling
- D. None of these.

18. Which statement will decide whether the number is an even number or not?

- A. if (num=0)
- B. if (num%2)
- C. if (num%2==0)
- D. if (num%2==1)

19. What will be the output of the given program?

```
#include<stdio.h>
void main()
{
    int i=10;
    printf("i=%d", i);
    {
        int i=20;
```

```

        printf("i=%d", i);
        i++;
        printf("i=%d", i);
    }
    printf("i=%d", i);
}

```

- A. 10 10 11 11
- B. 10 20 21 21
- C. 10 20 21 10
- D. 10 20 21 20

20. What is the output of the following statements?

```

for(i=10; i<15; i++)
printf("%d ", i);

```

- A. 10 11 12 13 14
- B. 10 11 12 13 14 15
- C. 9 10 11 12 13
- D. None of these

( 2 x 20 = 40 marks )

### Section B

B1.

A. Write a SINGLE C statement for each of the following.

- a) Assign the remainder of X and Y to Z and increment the value of X and Y by 1.
- b) Increment the value of A and B by 1 and assign the quotient to C
- c) Multiply the value of P by 10 , subtract it from the Q and assign the answer to R.
- d) Decrement the value of A and B by 1 assign the remainder to C.

( 4 marks)

B. Allow user to input N number of numbers and display the number of positives, negatives and zeros in the number series. ( N is a positive integer input through the keyboard)

( 6 marks )

C. Answer the following:

- a) What is the general format of a for loop, on which occasions you can use a for loop?
- b) How do you print 2 decimal places only?
- c) Name four data types in C? Explain them briefly.

- d) What is the general format of a do while loop? You may use an example to illustrate the answer
- e) Explain the general format and the use of the switch operation.

( 2 x 5 = 10 marks)

B2.

- A. Explain the purpose of using functions in C Language? State four types of functions and provide your own example for each of them. Write only the function headers  
( 5 marks)
- B. Create a function to provide an integer as a parameter to a function and display the number is an odd or even number. Input a number in the main function and display the input is an odd or even number.  
(5 marks)
- C. Compare and contrast the differences between recursion and iteration ( repetition)  
(4 marks)
- D. Implement a recursive function to calculate and display the factorial value of a given number. Provide a user input in the main function to calculate and display the factorial value.  
Hint : Factorial 5 = 120 ( 5 x 4 x 3 x 2 x 1 )  
(6 marks)

B3.

- A. Write a single C program to perform the following tasks;
  - I. Declare a single dimensional array with 10 elements and input values to the array  
(4 marks)
  - II. Display the values in the reverse order  
(4 marks)
  - III. Find and display the highest value  
(4 marks)
- B. Write a C program to declare a multi-dimensional array with the size of 3 x 4. Input the values to the array and display the values in the form of matrix.  
(5 marks)

C. Write C statements for the followings;

Declare an integer variable and assign a value

Declare an integer pointer and assign the address of variable to the pointer

Display the value of the variable through the pointer

(3 marks)