

Charotar University of Science and Technology
Faculty of Technology and Engineering
CE / IT / EC

Subject: CE143 Computer Concepts and Programming
First Internal Exam

Semester: 1st Sem B.Tech. (CE/IT/EC)**Maximum Marks: 30****Date: 30/11/2021 (Tuesday)****Time: 11:10 a.m. to 12:10 p.m.****Instructions:**

- (i) Attempt *all* the questions.
- (ii) Figures to the right indicate *full* marks.
- (iii) Make suitable assumptions and draw neat figures wherever if required.

Q-1 Multiple Choice Questions (Attempt All) [1 mark each]**CO [10]**

1. Choose the correct output for the given code:

1 [01]

```
#include<stdio.h>
int main()
{
    int i=0;
    while(i)
    {
        if(i=10)
        {
            break;
        }
    }
    printf("%d",i++);
    i++;
    return 0;
}
```

- a) 1
- b) 0
- c) 11
- d) 10

2. Identify the correct answer for the below given code:

1,2 [01]

```
#include<stdio.h>
int main()
{
    int i;
    for(i=0;i<25;i++)
    {
        switch(i)
        {
            case 0:
                i += 3;
            case 1:
                i += 5;
            case 5:
                i += 2;
            default:
                i += 4;
                break;
        }
    }
    printf("%d ", i);
    return 0;
}
```

- a) 3 8 12 17 22
- b) 13 18 23
- c) 15 20 25
- d) 14 19 24

3. Choose the correct option for given code:

1 [01]

```
#include <stdio.h>
int main()
{
    int i = 0;
    do
    {
        i++;
        if (i == 3)
            continue;
        printf("In while loop ");
    } while (i < 3);
    printf("%d\n", ++i);
}
```

- a) In while loop In while loop In while loop 4 b) In while loop in while loop 3
c) In while loop In while loop 4 d) Infinite loop

4. Which of the following option is true for variable names in C?

1 [01]

- a) They can contain alphanumeric characters as well as special characters
b) It is not an error to declare a variable to be one of the keywords (like goto, static)
c) Variable names cannot start with a digit
d) All of the above

5. What will be the output of the following code (as per turbo C++)?

1 [01]

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

- a) 3 b) 4
c) 9 d) 7

6. What will be the output of the following code? Choose the correct option.

1 [01]

```
#include <stdio.h>
int main()
{
    int a = 7, b = 6;
    if (a = 4)
        b--;
    printf("%d, %d", a, b--);
}
```

- a) 4, 4 b) 7, 4
c) 4, 5 d) 7, 5

7. Identify the correct output of following code:

1,2 [01]

```
#include <stdio.h>
int main()
{
    printf("%d ", 'A');
    goto l1;
    printf("%d ", 'B');
l1: goto l2;
    printf("%d ", 'C');
l2: printf("%d ", 'D');
}
```

- a) A B C D b) 65 66 67 68
c) 65 68 d) Compilation Error

8. Choose the correct option from the given code:

1 **[01]**

```
#include <stdio.h>

int main()
{
    int x = 2;
    if (x == 2)
        printf("true, ");
    else if (x = 6)
        printf("false, ");
    printf("%d\n", x);
}
```

- a) true, 2 b) false, 6
c) true, 1 d) true, 6

9. What will be the output of the below given code?

1 **[01]**

```
#include <stdio.h>
int main()
{
    const int Alpha;
    Alpha = 4;
    printf("Alpha is %d", Alpha);
    return 0;
}
```

- a) Alpha is 4 b) Alpha is random value
c) Compilation Error d) Runtime Error

10. Which is correct with respect to the size of the data types?

1 **[01]**

- a) char > int > float
b) int > char > float
c) char < int < double
d) double > char > int

Q-2 Answer the following questions

[10]

1. Explain the compilation and execution process of C program.
2. Explain the else if ladder with appropriate example.

1 [03]

1,2 [03]

OR

Explain the nested if else statements with appropriate example.

3. What is infinite loop? Explain how are infinite loops formed along with suitable example.

1,2 [04]

OR

Explain the importance of entry-controlled loop and exit control loop. Support your explanation with suitable example.

Q-3 Programs & Flowcharts (Attempt Any 2) [5 marks each]

[10]

1. Write a C program using switch case to calculate the fare of passengers travelling from Ahmedabad to different cities. Calculate the total fare (Fare*No. of passengers) by collecting the initial letter of city, no. of passengers. 1,2,6

Initial Character of city	City	Fare
‘J’	Jaipur	1000
‘S’	Surat	550
‘M’	Mumbai	760
‘C’	Chennai	1230
No Trains are available for rest of the entered city		

2. Write a C program and draw a flowchart, for below given scenario. Take a user input through keyboard as temperature in centigrade and display a suitable message according to the temperature conditions mentioned below. 1,2,6

Temperature(centigrade)	Type of weather
Temp < 0	Extremely freezy weather
Temp between 0 to 12	Very Cold weather
Temp between 13 to 20	Cold Weather
Temp between 21 to 30	Neither Cold nor Hot Weather
Temp between 31 to 40	Hot Weather
Temp between 40 to 50	Very Hot Weather
Temp > 50	Extremely Hot Weather

3. Write a program in C by taking n terms as user input and display that many odd natural numbers starting from 1. Also display the summation of all odd numbers visible on the console. 1,2,6

*****All THE BEST*****