DS

B.Tech(Honors) in Data Science Department
University Teaching Department, CSVTU, Bhilai
Subject – Learning Programming Concepts using C
Class Test 1-February 2022

Time: 1:30 hrs. Max. Marks: 40

Attempt all questions from each section.

Section A: Multiple Choice Questions: **(1×10)**

I. Which special character is used to print new line?

a) \r b) \a c) \t d) \n

II. The modulus operator (%) can be used only with integers.

a) True b) False c) None of these

III. Which of the following is branching statement of C language?

a) if statement b) if...else statement c) switch statement d) All of these

IV. Which of the following is example of relational operator in C language?

a) > b) < c) != d) All of these

V. _____ is the built in multiway decision statement in C.

a) for b) switch c) if d) while

VI. The break statement is optional in the switch-case statement

a) True b) False c) None of these

VII. Which of the following is not a bitwise operator?

a) & b) << c) >> d) ||

VIII. If the Boolean expression of if statement evaluates to _____, then the block of code inside the if statement will be executed.

a) True b) False c) None of these

IX. In C programming, the statement a=a+1 and a+=1 will produce same result.

a) True b) False c) None of these

X. The _____ provides pictorial representation of given problem.

a) Algorithm b) Pseudo-code c) Flowchart d) None of These

Section B: Descriptive Type Questions: **(5×6)**

I. a. Predict and explain the output of the following code **(1x2)**

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

b. Write a C program to print the sum of two integers entered by a user. A sample run of the program is given below. **(1x2)**

Output:
Enter two numbers:12 13
Sum of 12 and 13 is 25

c. Write a C program to find quotient and remainder of two integers entered by a user. A sample run of the program is given below. **(1x2)**

Output:
Enter two numbers:10 3
Quotient and Remainder of 10 / 3 is 3 and 1

II. a. Predict and explain the output of the following code **(1x2)**

```
#include<stdio.h>
int main() {
        int number = - -5;
        printf("number = %d", number);
        return 0;
}
```

b. Explaing the branching statements in C programming. **(1x2)**

c. Write a C program to check whether the entered number is even or odd. A sample run of the program is given below. **(1x2)**

Output:
Enter a number:7
Entered number is odd.

III. a. Predict and explain the output of the following code **(1x2)**

```
#include<stdio.h>
int main() {
        int number = 97;
        printf("%c", number);
        return 0;
}
```

b. Write a C program to input N integers from a user and print the sum of the N numbers entered by the user. A sample run of the program is given below. **(1x4)**

Output:
Enter number of terms:5

Enter number 1:5
Enter number 2:8
Enter number 3:6
Enter number 4:4
Enter number 5:2
Sum = 25

IV. a. Predict and explain the output of the following code **(1x2)**

```
#include<stdio.h>
int main() {
        int score = 100;
        if(score != 100)
                printf("You win");
        else
                printf("You lose");

        printf("best prize.");
        return 0;
}
```

b. What is flowchart? What are different components of flowchart? **(1x2)**

c. Draw a flowchart for addition of two numbers entered by a user. **(1x2)**

V. a. Predict and explain the output of the following code **(1x2)**

```
#include<stdio.h>
int main() {
        int a = 10;
        int b = 20;
        printf("Sum = %d", a + b);
        return 0;
}
```

b. Write a C program to print the sum of digits of a 3-digit number entered by a user. A sample run of the program is given below. **(1x4)**

Output:
Enter a 3-digit number:156
Sum of digits:12
