Candidate seat No: _____

Charotar University of Science and Technology [CHARUSAT]
Faculty of Technology and Engineering
U & P U Patel Department of Computer Engineering
Subject: CE141 Computer Concepts & Programming
First Internal Exam

Semester: 1st SEM B. Tech.
Branch: CE/IT/EC/CSE **Maximum Marks: 30**
Date: 10/09/2018 (Monday) **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 Do as Directed.

[A] Multiple Choice Questions. **[03]**

1. What is the output of following program?

```
#include<stdio.h>
void main(){
   printf("Charusat\bUniversity\b");  }
```

[A] Charusat\bUniversity\b [B] CharusatUniversity

[C] CharusaUniversity [D] CharusaUniversit

2. Which one of the following is not a valid C token?

[A] Variable [B] Identifier

[C] Constant [D] Keyword

3. Consider following statements and find out value of p1 and p2.

p1=(x=1,++x,p2=(y=0,--y));

[A] p1 = -1 , p2 = -1 [B] p1 = 1 , p2 = -1

[C] p1 = 2 , p2 = -1 [D] None of above

[B] State True or False with Justification. **[02]**

1. The following statement is valid in C language.

goto 20; **False**

2. Consider following C statements in continuation. Suppose, ‘x’, ‘y’ and ‘a’ are integer.

scanf(“%2d %4d”,&x,&y);

scanf(“%d %d”,&a,&x);

Four consecutive scanned values are 6789 , 4321 , 67 and 89.

Here, the value of ‘a’ will be 67. **False**

[C] Fill in the blanks. **[02]**

1. A _**Assembler**_ takes entire program and converts it into object code which is typically stored in a file.

2. Suppose int x =1 , y=0, z=5;

int a = x && y && z++;

Here, the value of 'z' will be _____**5**_____.

[D] Give output of following C Programs. **[03]**

(1)
```
#include<stdio.h>
#include<conio.h>
enum designFlags{
BOLD=5,ITALICS,UNDERLINE=1};
void main(){
int myDesign =
        ITALICS | UNDERLINE;
printf("%d",myDesign);
getch();
}
```

Output: 7

(2)
```
#include<stdio.h>
void main(){
    int z=10;
    printf("%d", z>>3);
    getch();  }
```

Output: 1

(3)
```
#include<stdio.h>
void main()  {
    int a=13;
    printf("%d", printf("%d",printf("%d",a)));
    getch();  }
```

Output: 1321

Q-2 Answer the following questions. [Any Two] **[10]**

1. Explain simple 'if….else' statement and compare it with ternary operator.
2. Draw a flow chart to evaluate following series.

   $1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \ldots\ldots + \frac{x^n}{n!}$, where, $0 < x < 1$
3. What do you mean by symbolic constant? Explain with example. Narrate any four rules to define symbolic constant. How variables and symbolic constant differs?

Q-3 Attempt following C Programs. [Any Two] **[10]**

1. Write a C program to reverse 3 digit number entered by user ***without using branching and looping concepts.***
2. Write a C program to perform several mathematical operations using functions of <math.h> file. Case 1 finds power of given number , case 2 finds rounded down nearest integer value of given number and case 3 finds absolute value of given variable.
3. Write a program to do following:
   - **(a)** Input an amount and convert it into rupees and paisa. (For Ex. 25.67 Rs = 25 Rs and 67 Paisa).**(Implicit type Conversion)**
   - **(b)** Input No of female and No of male and calculate the ratio of females to males in a town. No of female and No of male are in int and ratio is in float. (For Ex. No_of_Female = 10 & No_of_Male = 7 then ratio = 1.43).**(Explicit type Conversion)**