

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
 Date: 10/09/2018 (Monday)

Maximum Marks: 30
 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]**

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

[A] Variable [B] Identifier
 [C] Constant [D] Keyword
- 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]**

- The following statement is valid in C language.

```
goto 20;
```
- 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.

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

- A _____ 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 _____.

[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();
}
```

2.

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

3.

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

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.

$$1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n!}, \text{ where, } 0 < x < 1$$

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)