

Charotar University of Science and Technology [CHARUSAT]**Faculty of Technology and Engineering****U & P U Patel Department of Computer Engineering****Subject: CE 103 Computer Concepts & Programming****First Internal Exam****Semester: 1st Sem B. Tech. (CE/IT/EC)****Maximum Marks: 30****Date: 07/09/2013 (Saturday)****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.**[10]**

- (a) What is the difference between keyword and identifier? **[01]**
- (b) Give difference between compiler and interpreter. **[02]**
- (c) Is main() function necessary in C program? State YES or NO and justify your answer. **[01]**
- (d) Explain following function. Also mention necessary library file. **[02]**
 - 1.) ceil() 2.) isalnum()
- (e) What are the different types of software? **[01]**
- (f) Find output of the following program: **[03]**

1) <pre>#include<stdio.h> main() { int a, b, c, x, y; a = 9; b = 12; c = 3; x = a - b / (3 + c) * (2 - 1); y = a - (b / (3 + c) * 2) - 1; printf("%d %d",x,y); }</pre>	2) <pre>#include<stdio.h> main() { int x=4, y=5; if(x == y) printf("\n Equal"); else printf("\n Not Equal"); if(x = y) printf("\n Equal"); else printf("\n Not Equal"); }</pre>	3) <pre>#include<stdio.h> main() { char ch = 'Y'; switch(ch) { default: printf("yes OR no"); case 'Y' : printf("YES"); break; case 'N' : printf("NO"); break; } }</pre>
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Q-2 Answer the following question.**[10]**

- (a) Draw a flowchart to calculate the parking charges of a vehicle. Input type of a vehicle (bus, truck, car) and number of hours. Calculate the charges as given below: **[02]**
 - truck / bus - 20 rs per hour
 - car - 10 rs per hour
 - scooter/bike = 5 rs per hour

OR**[02]**

- (a) Write an algorithm to swap two numbers without using third variable.

- (b) Draw and explain the basic structure of C program. [04]
(c) Explain C tokens in detail with example. [04]

OR

- (c) List all categories of operators and explain any three in detail. [04]

Q-3 Answer the following question. [10]

- (a) Write a program to input the value of X from user and evaluate the following: [03]

$$Y = \begin{cases} 2.5X + 3 & \text{for } X \leq 2 \\ 2X + 3 & \text{for } X > 2 \end{cases}$$

- (b) Write a program to read month of the year as an integer and display the name of the month [03]
using switch case statement. (Ex. For Input=1, output should be “January”)
(c) Write a program to evaluate the following series using loop. [04]

$$1/1^2 + 2/2^2 + 3/3^2 + 4/4^2 + 5/5^2 + \dots + n/n^2$$

OR

- (c) Write a program to input an integer number and reverse the number using loop. [04]
