

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

Subject Name :C Programming and Mathematical Algorithms -I

Subject Code :5SC01MTC5

Branch : M.Sc.(Mathematics)

Semester : 1 Date : 09/12/2015 Time : 10:30 To 12:00 Marks :35

### Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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- Q-1 Attempt the Following questions. (07)**
- a. Can we use reserve word as identifier? (1)
  - b. Is “while” identifier? If no, write the appropriate reason. (1)
  - c. Write C-statement of following: (1)  
$$x^2 + \sin \theta + \frac{y}{4}$$
  - d. Write C-function and header file for  $\sqrt{x}$ . (1)
  - e. Write types of constants.
  - f. Write output for given program: (1)  
$$\begin{aligned}x &= x + y; \\y &= x - y; \\x &= x - y;\end{aligned}$$
  - g. Every string ends with null character. Write the following statement is true or false. (1)
- Q-2 Attempt all questions (14)**
- a. Write note on arithmetic operator and logical operator. (7)
  - b. Write program to print first k perfect number. (7)
- OR**
- Q-2 Attempt all questions (14)**
- a. Write note on do-while loop. Enlist differences between while and do-while loop. (7)
  - b. Write program to find root of quadratic equation. (7)
- Q-3 Attempt all questions (14)**
- a. Write algorithm for bisection method. (5)
  - b. Write program to find  $e^x$ . (5)
  - c. Convert for loop in to while loop. (4)



OR

Q-3

**Attempt all questions**

- a. Write note on **if statement**. (5)
- b. Write program to find reverse number of given number. (5)
- c. Define structure having structure name data and members for structure are serial number; name; basic salary; dearness allowance and date of birth. (4)

