Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–1st / 2nd EXAMINATION– WINTER 2015

Subject Code: 110003   **Date:30/12/2015**
Subject Name: Computer Programming and Utilization
Time: 10:30am to 01:00pm   **Total Marks: 70**
Instructions:
1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks**

Q.1 (a) Explain the structure of 'c' program   **14**
    (b) What will be the output of following program segment ?
```
        int a=2, j=4, k;
        float a,b;
        k=i/j*j ;
        a=i/j*j;
        b=j/i*I;
    printf("%d,%d%f, k,a,b);
```
    (c) Write the syntax of scanf() function and printf() function.

Q.2 (a) Explain the syntax of multiple if…else statement.   **14**
    (b) Write a program that converts Fahrenheit temperature to centigrade
            Cent.=5/9(fahr.-32)
    (c) Write a program that evaluates the polynomial $4x^3 - 5x + 9$

Q.3 (a) What are the different types of looping structures?   **14**
    (b) Compare break statement with continue statement.
    (c) Write a program to print following pattern using loop
```
    1
    1 3
    1 3 5
    1 3 5 7
    _ _ _
```

Q.4 (a) For the declaration as int a[10]; the last element is stored at a[9], is it   **14**
        true ? explain your answer.
    (b) What is string ? what are the operations that can be performed on
        string ?
    (c) Write a program to multiply two matrices A and B of size 3*3 and
        store the answer in matrix C . C =A*B.

Q.5 (a) Explain following string manipulation functions   **14**
            Strstr(), strchar(), strlen()
    (b) Write a program that read two strings and compare them using the
        function strcmp() and print message that first string is equal, less,
        greater than second one.

14

Q. 6 (a) What is pointer ? explain how pointers are declared an initialized?

(b) Write a program to find factorial of a given number using recursion.

(c) What are the difference between local and global variables ?

Q.7 (a) Explain how the members of structure can be accessed? **14**

(b) What is nested structure ? explain with suitable example.

(c) Explain in brief fscanf(),and fprintf() function in handling data types from a file.

****