GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER– 1st / 2nd • EXAMINATION – SUMMER 2018

Subject Code: 110003   **Date: 23-05-2018**
Subject Name: Computer Programming & Utilization
Time: 02:30 pm to 05:00 pm   **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 Various Symbol used in Flowchart. Draw a flowchart to find factorial of given no. **07**
(b) Explain basic structure of C program with example. **07**

Q.2 **(a)** Explain different operators in C. **07**
(b) Explain entry controlled and exit controlled loop with suitable example **07**

Q.3 **(a)** Write a program to find sum of digits of a number.
(e.g. input number 9834, output is : 9+8+3+4=24) **07**
(b) Write a program for simple calculator(+, -, *, /, %) using switch-case statement. **07**

Q.4 **(a)** Define an array. Explain declaration and initialization of one dimensional, two dimensional and multi-dimensional array. **07**
(b) Explain elements of user defined functions with suitable example **07**

Q.5 **(a)** Explain following string handling functions:
    I.   strcat()
    II.   strcmp()
    III.   strlen
    IV.   strstr()
    V.   strcpy() **07**
(b) What is structure? How it is different from union?
Explain nested structure with example. **07**

Q.6 **(a)** What is pointer? How Pointer is initialized? How it is different to array? **07**
(b) List and explain File Management Functions of C. **07**

Q.7 **(a)** Write a program to print following pattern.
    1
    2 3
    4 5 6
    7 8 9 10 **07**
(b) Write a program to add two 2×2 matrix. **07**