Paper Id: | 230149 | **Roll No:** ☐☐☐☐☐☐☐☐☐☐☐☐☐

B. TECH.
(SEM-I) THEORY EXAMINATION 2019-20
COMPUTER PROGRAMMING

Time: 3 Hours   *Total Marks: 100*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.**   **2 x 10 = 20**

   a. Explain Flow Chart.
   b. Explain characteristics of an algorithm.
   c. What is pipelining?
   d. Explain Recursion.
   e. Explain Application software.
   f. Define identifier.
   g. Explain Compiler.
   h. What is NULL character?
   i. Define Digital computer.
   j. What is Linker?

SECTION B

2. **Attempt any *three* of the following:**   **10 x 3 = 30**

   a. Explain the String handling functions in detail.
   b. Define Storage class with its type in detail.
   c. What is Array? Write a program in C language to multiply two m x n matrices.
   d. Explain Call by value & Call by reference with suitable example.
   e. What is Pointer? Explain its advantages and disadvantages of it.

SECTION C

3. **Attempt any *one* part of the following:**   **10 x 1 = 10**

   (a) What is Function? Write a C program to calculate the factorial of a given number.
   (b) Explain the followings (i) C Preprocessor (ii) Macros

4. **Attempt any *one* part of the following:**   **10 x 1 = 10**

   (a) Explain the followings (i) Top down Approach (ii) Logical operator
   (b) Explain String Palindrome. Write a program in C to check whether a given string is palindrome or not?

5. **Attempt any *one* part of the following:**   **10 x 1 = 10**

   (a) Define Structure & Union in C with suitable examples.
   (b) Write short Notes on followings (i) While & do-while (ii) Continue and Break

6. **Attempt any *one* part of the following:**   **10 x 1 = 10**

   (a) How digital computer is different from analog computer? Classify various digital computers in detail.
   (b) What is Operating System? Explain LINUX operating system in detail.

7. **Attempt any *one* part of the following:**   **10 x 1 = 10**

   (a) Explain
   (b) Define Binary Search with suitable program.