

B. TECH.
(SEM -) THEORY EXAMINATION 2017-18
FUNDAMENTALS OF COMPUTER PROGRAMMING

*Time: 3 Hours**Total Marks: 70***Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt *all* questions in brief. 2 x 7 = 14**
- a. What do you mean by Flow Chart? Explain its various components.
 - b. What do you mean by Hexadecimal number system?
 - c. What do you mean by Operating System? Give any two examples.
 - d. What do you mean by pointer? Explain it with example.
 - e. What is purpose of switch statement in 'C'? Explain it with an example.
 - f. What are functions? How many types of functions are there?
 - g. What do you mean by an 'Algorithm'? Write an algorithm to add two numbers.

SECTION B

- 2. Attempt any *three* of the following: 7 x 3 = 21**
- a. Write a C program which reverses the digits of the integer input given to it. For example, an input 54321 produce output as 12345.
 - b. What do you mean by Operators? Discuss about arithmetic operators and relational operators.
 - c. Write down a program in 'C' language to search an element in an array using binary search.
 - d. Write a C program to sort a set of n elements using bubble sort.
 - e. Explain the Storage Class used in C Language with their Scope.

SECTION C

- 3. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Discuss Enumerated Data Type in C Language with the help of code.
 - (b) Explain the Parameter passing by “Value” &” Reference”
- 4. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Explain the Followings (i) Top-down Approach (ii) Recursion
 - (b) Differentiate between System Software & Application Software with example.
- 5. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Define the Operators in C Language with their precedence & Associativity.
 - (b) What are different data types in C language? Explain range, memory size of each with its format specifier.

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

- (a) (i) Describe Compiler. Interpreter, Assembler?
(ii) Explain in detail about scope of a variable.
- (b) Discuss about the generation of computers along with its advantages and disadvantages

7. **Attempt any *one* part of the following:**

7 x 1 = 7

- (a) Write down a Program in 'C' to declare a structure which contains the following members. List students having Roll no. Name, Father's name. Age, City
- (b) Write short note on the following:
 - (i) ASCII code
 - (ii) Array