B.Tech (Sem. – 1,2)

PROGRAMMING FOR PROBLEM SOLVING

Subject Code: BTPS-101-18

M Code: 75346

Date of Examination : 16-01-23

Time: 3 Hrs.   **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C have FOUR questions each, carrying EIGHT marks each.**
3. **Attempt any FIVE questions from SECTION B & C, selecting atleast TWO questions from each of these SECTIONS B & C.**

SECTION-A

1. **Write briefly:**

   a) What is the syntax of nested If statement?

   b) What are looping statements?

   c) What is a complier?

   d) What is the need for an operating system?

   e) Differentiate between compiler & interpreter.

   f) What are the various types of software used in computers?

   g) How many bytes are required for Int a[20] statement?

   h) What is an algorithm?

   i) How syntax of a program is different from semantics?

   j) What is a conditional statement?

SECTION-B

2. Write a program in 'C' language to find the greatest common divisor of two numbers.

3. What is a function? What is the difference between call by value & call by reference? Explain with help of an example.

4. Write a program to sort a given list of numbers in ascending order.

5. Describe the various data types used in 'C'.

SECTION-C

6. What is an array? Write a program to find the sum of the rows, columns and non diagonal elements of a matrix.

7. What is the syntax of various input output statements available in programming language?

8. Describe briefly about recursion with suitable examples.

9. Write the syntax with two different examples each for:

   a) struct

   b) union

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.