

Roll No.

Total No. of Pages : 02

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B.Tech.(AI&ML/AI&DS/Data Science/Block Chain/CE/CSE/Cyber Security/EE/ECE/Cyber Security/Electronics & Telecommunication Engineering/FT/IT/ME/Internet of Things and Cyber Security including Block Chain Technology) (Sem.-1)

PROGRAMMING FOR PROBLEM SOLVING

Code : BTPS101-18

M.Code : 93803

Date of Examination: 13-12-2023

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.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A

1. Write short notes on :

- a) What are bitwise operators? Explain any two bitwise operators with proper syntax.
- b) Draw the block diagram of computer and explain in brief each component of computer.
- c) What is an algorithm? Give an example.
- d) Give an example of logical error in C.
- e) Write the syntax of switch control statement.
- f) What is an array? How to initialize each element of the array?
- g) What is a function? Differentiate between user-defined and library function.
- h) What is structure? Write the syntax to create a structure.
- i) What is a pointer? How can we access a variable using pointer?
- j) Differentiate between while and do-while loop.

SECTION-B

2. What is recursion? Write a program to compute the Fibonacci series using recursion.
3. Write a program to find the smallest element in an array.
4. Explain in detail various types of operators in C.
5. Explain various data types in C.

SECTION-C

6. Write a program or algorithm to implement selection sort.
7. Explain in detail various string library functions with the help of proper syntax.
8. What is the role of compiler? What is object and executable code?
9. Write a program to display sum of first n natural numbers.

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.