

Roll No.

Total No. of Pages : 02

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B.Tech.( (AI&ML)/(DS)/(CE)/(CSE)/(EE)/(ECE)/(FT)/(IT)/(R&AI)/  
(ME)/Internet of Things and Cyber Security including Blockchain  
Technology) (Sem.-1,2)

**PROGRAMMING FOR PROBLEM SOLVING**

Subject Code : BTPS-101-18

M.Code : 75346

Date of Examination : 22-05-2024

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 briefly :**

- a. How is a source program converted into executable code? Explain each step.
- b. List various symbols used in flowchart.
- c. Give an example of logical error.
- d. What is an array? How can we create and initialize an array?
- e. What is a structure? Write syntax to create a structure.
- f. Explain various user-defined data types.
- g. Differentiate between call by value and call address using functions.
- h. What is break statement? Give an example using for loop.
- i. What is a string? How can be copy the content of string into another string?
- j. Explain various logical operators with the help of an example of each.

## SECTION-B

2. What are the advantages of using flowchart? Create a flowchart to find the largest of three numbers.
3. What is for loop? Write syntax for the same. Write a program to print first n numbers using for loop.
4. What is an Operating System? Explain different types of Operating Systems.
5. What is an operator? Explain in detail different types of operators used in C Programming language.

## SECTION-C

6. What are the benefits of using recursion? Write a program to find the factorial of a number using recursion.
7. Explain in detail various string functions.
8. Explain in detail all types of control statements with the help of syntax for each.
9. Differentiate between array and structure. Write a program to create a simple structure for storing student information.

**NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC case against the Student.**