

Code No: 181AP

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech I Year I Semester Examinations, January/February - 2024

PROGRAMMING FOR PROBLEM SOLVING

(Common to CSE, IT, CSIT, CE(SE), CSE(CS), CSE(DS), CSD)

Time: 3 Hours

Max. Marks: 60

Note: This question paper contains two parts A and B.i) **Part- A** for 10 marks, ii) **Part - B** for 50 marks.

- Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.
- Part-B consists of **ten questions** (numbered from 2 to 11) **carrying 10 marks each**. From each unit, there are two questions and the student should answer one of them. Hence, the student should answer five questions from Part-B.

PART- A**(10 Marks)**

- | | | |
|------|---|-----|
| 1.a) | printf() function returns _____ | [1] |
| b) | What are Command-line arguments? | [1] |
| c) | Define Structure. | [1] |
| d) | Write advantages of Arrays. | [1] |
| e) | Write the syntax for ftell(). | [1] |
| f) | What is the need of Binary file? | [1] |
| g) | Write the syntax for malloc(). | [1] |
| h) | What is a Signature of a function? | [1] |
| i) | What is the time complexity of Linear Search? | [1] |
| j) | Write one application sorting. | [1] |

PART - B**(50 Marks)**

2. What are the advantages of Algorithms? Write an algorithm for finding roots of a quadratic equation. [10]
- OR**
- 3.a) Write about auto, extern, static and register storage classes.
- b) Write a C program to print the given pattern. [5+5]

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- 4.a) Explain Enumeration data type.
- b) Write about Pointers in C. [4+6]

OR

5. How Strings are created in C? Write short notes on strlen(), strcat(), strcpy() and strstr(). [10]

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6. Write short notes on define, undef, if, ifdef and ifndef pre-processor directive. [10]

OR

7.a) Explain Text files.

b) Write a C program to count number of words in a text file. [4+6]

8.a) Explain how Recursion is useful in C programming.

b) Write a C program to print Fibonacci series using Recursion. [3+7]

OR

9.a) Explain how do you pass pointers to a function in C.

b) Write a C program to swap to 2 given numbers using call by reference. [5+5]

10. Explain Binary search method with an example. [10]

OR

11. Write Bubble sort method. Explain with an example. [10]

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