

**BACHELOR OF TECHNOLOGY (CBCS - 2023)**  
**B. Tech. Sem-I Computer Science & Engineering AI & ML : SUMMER : 2025**  
**SUBJECT: PROGRAMMING & PROBLEM SOLVING**

Day : Monday  
Date : 19/05/2025

**S-27617-2025**

Time : 10:00 AM-01:00 PM  
Max. Marks : 60

**N.B:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data if necessary.

**Q.1** C-programming language is said to be a middle level language. Justify above statement. [10]

**OR**

**Q.1** What do you mean by following terms, explain their significance in program development FLOW CHART, ALGORITHM and PSEUDO-CODE. [10]

**Q.2** What do you mean by unconditional transfer of control? Give example instruction. [10]

**OR**

**Q.2** What are the various data types? Give example of each of the types. [10]

**Q.3** One dimensional array is created and it stores integer values (without repetition). Write a program to find out smallest value with its index (i.e. location). [10]

**OR**

**Q.3** A data sheet consists of Gender "m" for male and "F" for female. Create one dimensional array of type char, and find out number of "Male" and "Female". [10]

**Q.4** What do you mean by "Recursive call of function"? Give any example program for recursive function call. [10]

**OR**

**Q.4** What do you mean by "Function Call" and "Function Declaration"? Give simple example. [10]

**Q.5** What are the various file related function available? Give any five example with their usage. [10]

**OR**

**Q.5** State logic of COMMAND LINE ARGUMENTS. [10]

**Q.6** Give a program to SWAP two integers using pointers. Explain logic with comments. [10]

**OR**

**Q.6** How a POINTER feature increase efficiency of program code? [10]

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