

BACHELOR OF TECHNOLOGY (CBCS - 2023)
B. Tech. Sem-I CS&E-A&M : WINTER: 2025
SUBJECT: PROGRAMMING & PROBLEM SOLVING

Day : Thursday
Date : 18/12/2025

W-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 labelled diagrams **WHEREVER** necessary.
- 4) Use of non-programmable **CALCULATOR** is allowed.

Q.1 Define pseudocode. Write pseudocode to find whether given number is palindrome or not. (10)

OR

Q.1 Explain the flowchart and the symbols of flowchart. Draw the flowchart for displaying if the user entered number is positive, negative or zero. (10)

Q.2 Explain the switch control statement and write a C program to input an alphabet and check whether it is vowel or consonant using switch case. (10)

OR

Q.2 Explain post and pre increment operator. Write a program to display the factorial of user entered number. (10)

Q.3 Explain the following library functions with proper example. (10)
i) strcmp() ii) strcat() iii) sqrt() iv) strlen()

OR

Q.3 Define array. Write a C program to find the sum of n integer numbers using one dimensional array. (10)

Q.4 Write a program to design a structure Employee with members as employee_no, employee_name, experience and salary. Read the information of 100 employees and display employee information that is having 5 years or more experience and salary less than Rs. 10,000. (10)

OR

Q.4 What is recursive function? Explain with an example. (10)

Q.5 What is call by reference? Write function for swapping of two numbers using pointers. (10)

OR

Q.5 What is pointer in C? Write a program to display numbers 1 to 10 using pointers. (10)

Q.6 Explain FILE pointer with example. State the use of FILE pointer. (10)

OR

Q.6 What different operations can be performed on file? Explain with example. (10)

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