

**GOVERNMENT POLYTECHNIC MUMBAI**  
**TERM END EXAMINATION**

Programme : CO/IF Engineering  
Course Title : Logic Development using C Programming

DS/C

2:30 Hours / 60 marks

Enrolment No.

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**Instructions:**

1. Attempt all the questions.
2. Illustrate your answers with neat sketches wherever necessary.
3. Use of Mathematical Tables, Steam Table and Pocket Calculator (non-programmable) is permissible.
4. Marks on Right Hand Side indicate full marks for the question.
5. Assume suitable additional data, if necessary
6. CO-COURSE OUTCOMES, L-LEVELS

**Q.1 Attempt any SIX**

12 Marks

- a. Define the terms : (i) Algorithm (ii) Flowchart. [CO-1, L-R]
- b. Draw flowchart for calculating area of a circle. [CO-1, L-U]
- c. Write structure of 'C' program. [CO-2, L-R]
- d. Define looping. Give syntax of while loop. [CO-3, L-R]
- e. Define array. Give example. [CO-4, L-R]
- f. List any two string functions (predefined functions). [CO-5, L-R]
- g. Differentiate between predefined functions and user defined functions. (any two points). [CO-5, L-U]
- h. Write syntax to create structure in 'C'. [CO-6, L-R]
- i. Write the meaning of \* and & operators w.r.t pointers in 'C'. [CO-7, L-R]

**Q.2 Attempt any THREE**

12 Marks

- a. Write an algorithm for reversing the digits of an integer. [CO-1, L-A]
- b. Differentiate between procedure oriented programming (POP) & object oriented programming (OOP) (4 points). [CO-2, L-U]
- c. Write a program to implement arithmetic operators in 'C'. [CO-2, L-A]
- d. Explain ternary operator with example. [CO-3, L-U]

**Q.3 Attempt any THREE**

12 Marks

- a. Write a program to illustrate the use of break and continue statement in 'C'. [CO-3, L-A]
- b. Write a program to perform following operations on string (use built-in functions) (i) Comparison of 2 strings (ii) Find length of a string. [CO-5, L-A]
- c. Write a program to calculate factorial of a number. Write user defined function fact() which takes one number as an argument. [CO-5, L-A]
- d. Explain structure within structure with example. [CO-6, L-U]

**Q. 4 Attempt any FOUR****12 Marks**

- a. Draw flowchart for the exchange to two variables without temporary variable. [CO-1, L-A]
- b. Explain switch() statement with it's syntax. [CO-3, L-U]
- c. Write a program to calculate length of an array and print it on screen. [CO-4, L-A]
- d. Write a program to accept name of a student from the user and display it on the output screen. [CO-4, L-A]
- e. Define printer. Give it's syntax & example. [CO-7, L-R]

**Q. 5 Attempt any TWO****12 Marks**

- a. Explain string input/output with example. [CO-4, L-U]
- b. Write a program using structure to display information of employee which consist of employee id, name, age and salary. [CO-6, L-A]
- c. Write a program to perform arithmetic operations on pointer. [CO-7, L-A]

\*\*\*\*End\*\*\*\*

