

Total No. of Questions :10]

PE12179

[6581]-2410

F.E.

**ESC-105-COM : FUNDAMENTALS OF PROGRAMMING
LANGUAGES**

(2024 Pattern) (Semester-I/II) (Credit System)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Assume Suitable data if necessary.

- Q1)** a) What is a character set in C? Explain with examples. [3]
b) What are keywords and identifiers in C? [3]
c) What are C tokens? Explain the different types. [4]
d) Describe the history and importance of the C programming. [4]

- Q2)** a) Write an algorithm to perform arithmetic operations (+, -, *). [3]
b) What are symbolic constants in C? How are they defined? [3]
c) Define flowchart. Draw the flowchart to compute the area of circle. [4]
d) Define variables with syntax. Enlist the datatypes in C. [4]

- Q3)** a) Explain increment and decrement operators in C with suitable examples. [3]
b) Explain operator precedence and associativity in C. [3]
c) Describe arithmetic expressions in C with suitable examples. [4]
d) What are bitwise operators in C? [4]

OR

- Q4)** a) What is a conditional operator in C? Explain with suitable example. [3]
b) Describe various logical operators in C. [3]
c) Write a program in C to demonstrate use of relational operators. [4]
d) How are expressions evaluated in C? [4]

- Q5) a) What is the if else statement in C? Explain with examples. [4]
b) Write a program in C to generate the multiplication table of a number. [5]
c) Describe the syntaxes of while and do while loop. [5]

OR

- Q6) a) What is the use of the break statement in loops or switch statements? [4]
b) Write a program in C to decide the greatest amongst three numbers. [5]
c) Write a program in C to decide if the entered number is prime or not. [5]

- Q7) a) How do you declare a one-dimensional and two-dimensional array? [4]
b) Describe the different ways of array initialization. [5]
c) How do you write and read input strings from terminal in C? [5]

OR

- Q8) a) What is a two-dimensional array? Explain with example. [4]
b) Describe the basic predefined string handling functions. [5]
c) Write a C program to provide the comparison result of user input strings. [5]

- Q9) a) Why do we need user-defined functions in C? [4]
b) Describe the elements of user-defined functions. [5]
c) Write a program to generate fibonacci series up-to first 10 numbers. [5]

OR

- Q10) a) Explain structure declaration and initialization. [4]
b) What is recursion? Explain with suitable example. [5]
c) Explain categories of functions in C with examples. [5]

