[6351]-118
F.E.
FUNDAMENTALS OF PROGRAMMING LANGUAGES
(ESC - 105 - Com) (2024 Pattern) (Semester - I)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates :

1) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q10.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Assume suitable data, if necessary.*

Q1) a) Define an algorithm and write an algorithm for addition of two numbers.**[3]**

b) Explain brief history of 'C' programming. **[3]**

c) Define an identifier in C. Explain rules of naming an identifier. **[4]**

d) Explain data types in C. **[4]**

OR

Q2) a) Draw a flowchart for division of two numbers. **[3]**

b) Explain tokens in C programming. **[3]**

c) Explain different storage classes in C. **[4]**

d) Define a constant in C. What are the different types of constants in C?**[4]**

Q3) a) Define an operator and operand in C programming. Give a suitable example. **[3]**

b) What is a conditional operator in C? Explain with a suitable example.**[3]**

c) Explain relational operators in 'C'. **[4]**

d) What is the use of assignment operators? Explain different assignment operators. **[4]**

OR

Q4) a) Explain different arithmetic operators with suitable example. **[3]**

b) What are the different logical operators in 'C'? **[3]**

c) Explain bitwise operators in 'C'. **[4]**

d) What do you mean by operator precedence? Specify the precedence of arithmetic operators. **[4]**

P.T.O.

Q5) a) Explain different conditional/branching statements in C programming. **[4]**

b) Explain while loop with syntax, Flowchart and give a suitable example. **[5]**

c) Write a program in C to find factorial of a number. **[5]**

<div align="center">OR</div>

Q6) a) Explain use of break and continue statement in C programming with a suitable example. **[4]**

b) Explain for loop with syntax, flowchart and give a suitable example. **[5]**

c) Write program to check whether a number is even or odd. **[5]**

Q7) a) Explain one dimensional array with a suitable example. **[4]**

b) What are the different ways of initialization of arrays in C programming? **[5]**

c) Write a program in 'C' for addition of two matrices. **[5]**

<div align="center">OR</div>

Q8) a) What are the properties of arrays in C? **[4]**

b) What are the different ways of string initialization? **[5]**

c) Write a program to count number of characters in a string using a looping statement. **[5]**

Q9) a) Explain user defined function definition with syntax and give a suitable example. **[4]**

b) What is a recursion? Explain it with a suitable example. **[5]**

c) Write a program for leap year using function. **[5]**

<div align="center">OR</div>

Q10) a) Explain structure declaration and initialization. **[4]**

b) Explain function declaration, function definition and function call. Give a suitable example. **[5]**

c) Write a program for prime number using function. **[5]**

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