

2026

COMPUTER SCIENCE — MDC

Paper : CC-2

(Problem Solving Using C)

Full Marks : 75

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **question no. 1** and **any three** from **Section-A** and **any five** from **Section B**.

1. Answer **any five** questions :

2×5

- (a) Distinguish between a keyword and an identifier in C.
- (b) Mention the purpose of the continue statement.
- (c) What is meant by a dangling pointer?
- (d) What is an infinite loop? Mention one possible cause.
- (e) Briefly discuss about recursion with suitable example.
- (f) What is a pointer to a structure? Give example.
- (g) What do you mean by file opening mode?
- (h) What is short-circuit evaluation in a logical expression?

Section - A

2. Write a C program to evaluate the series :

$$1 + x + x^2 + x^3 + \dots + x^n$$

for given values of x and n .

5

3. Explain the difference among break, exit and continue statements with suitable examples.

5

4. Explain different types of storage class specifier.

5

5. Draw a flowchart to determine the number of digits in a positive integer.

5

6. Explain the importance of operator precedence and associativity in evaluating C expressions.

5

Please Turn Over

(7620)

Section - B

7. (a) Explain call by value and demonstrate it by writing a function that calculates the square of a number.
(b) Write a recursive function to generate the n -th Fibonacci term. 4+6
8. (a) Explain an array of structures with an example involving employee records.
(b) Write a C program to compare two structure variables containing the same type of information. 5+5
9. (a) Write a C program to count the number of positive, negative and zero elements in an array.
(b) Explain the significance of EOF while reading a file character by character. 6+4
10. (a) Explain the different types of operators in C with suitable examples.
(b) Explain implicit and explicit type conversion in C. 5+5
11. (a) Write a C program to check whether a given number is even or odd using the conditional operator.
(b) Explain the difference between while and do-while loops with suitable examples. 5+5
12. (a) Write a C program to find the sum of the digits of an integer.
(b) Explain the declaration, initialization and use of pointers with a suitable example. 5+5
13. (a) What is a union? How it is different from structure?
(b) Write the purpose of fopen(), fclose(), fgetc() and fputc() for file operation. (2+2)+(1½×4)
14. (a) Explain actual and formal parameters of a function with an example.
(b) Write a C program to read and display the contents of a text file. 5+5
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