

2026

COMPUTER SCIENCE — MINOR

Paper : MN-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) Discuss infinite loop with an example.
- (b) Differentiate between local and global variable in C.
- (c) What do you mean by type casting in C? Give example.
- (d) How is 2D array represented in memory? Give example.
- (e) What is the purpose of using strcat() function? Give example.
- (f) How is decision operation represented in a flowchart?
- (g) How can the conditional operator be used to find whether a number is even or odd?
- (h) What do you mean by scope of a variable? Give example.

Section - A

- 2. What is a user defined function? Show user defined function declaration, definition and calling with example.** 2+3
- 3. Explain storage class in C with example.** 5
- 4. Elaborate differences between while loop and do-while loop with proper examples.** 5

Please Turn Over

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5. What will be the output of the following program? Give proper explanation of output. 5

```
#include<stdio.h>

int main(){int num[26],temp;
    num[0] = 100;
    num[25] = 200;
    temp = num[25];
    num[25] = num[0];
    num[0] = temp;
    printf(“%d %d”, num[0],num[25]);
    return 0;
}
```

6. Write a C program to find the sum of digits of a positive integer. 5

Section - B

7. (a) Differentiate between compiler and interpreter.
 (b) Write a C program to test whether a three digit number is an Armstrong number or not. 4+6
8. (a) Explain ternary operator with the aid of an example.
 (b) What type of control statement is switch case? Give an example of switch case having at least two cases and a default case.
 (c) Differentiate between Break and Continue statements. Explain with aid of an example. 3+(1+2)+4
9. (a) Differentiate between structure and union data types in C with examples.
 (b) State the purpose of gets () and puts () functions in C. 5+5
10. (a) Explain with examples pre-increment and post-increment operators in C.
 (b) Define recursion. Write differences between recursion and iteration. Write a recursive C function to find factorial of a number. 3+(2+2+3)
11. (a) char s[20] and char*s- are these two declarations same? Justify with example.
 (b) Write a short note on bitwise operators in C. 5+5
12. (a) What is the purpose of using #define in C? Give example.
 (b) Write a C program to count the number of vowels present in a given string. 4+6

13. (a) How malloc() function can be used to dynamically allocate memory? Explain with an example.
(b) Differentiate between malloc() and calloc() functions. What is the usage of free() function in C?
5+(3+2)
14. (a) Explain how fopen() function can be used for opening a text file in append mode. Give example.
(b) Write a program in C to read contents of a text file which contains multiple lines and count number of characters present in the longest line.
4+6
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