Reg. No ..... Name **25INT102**

END SEMESTER EXAMINATION- NOVEMBER 2025

SEMESTER 1 : INTEGRATED M.Sc. PROGRAMME COMPUTER SCIENCE - DATA SCIENCE

COURSE : **21UP1CRMCP1 : PROGRAMMING IN C LANGUAGE**

(For Regular 2025 Admission and Supplementary 2024/2023/2022/ 2021 Admissions)

Time : Three Hours Max. Weightage: 30

PART A
Answer any 8 question

1. State the purpose of rewind() function.
2. Find errors, if any, in the following code segment:
```
char str[10];
strcpy(str, "Computer Science");
```
3. Predict the output of the following code segment when executed:
```
int m = - 14, n = 3 ;
printf ("%d \n", m/n * 10) ;
```
4. If a pointer 'ptr' points to a variable 'x', write the statement that would represent the idea.
5. Define the term 'exit controlled loop'. Give an example for the same.
6. Find error, if any, in the following statements:
```
FILE fptr;
fptr = fopen ("data", "a+");
```
7. Identify the error(s) in the following piece of code, if any:
```
# Include<stdio.h>
main(){
printf ("Welcome to C programming");
};
```
8. Specify the syntax of calloc() function.
9. In a flowchart, draw the symbol that would connect one portion of data flow to another area in the same chart of a different page.
10. If an array is declared as `char name[20]`, calculate the total memory required (in bytes) for the array.

(1 x 8 = 8 weight)

PART B
Answer any 6 question

11. Differentiate between implicit and explicit typecasting.
12. With a suitable example, explain the working of a for loop in C.
13. Discuss how values can be assigned to struture elements statically.
14. Write a sample code for displaying the values stored in an array.
15. Write a sample algorithm that shows sequential manner of execution.
16. Write a sample code to display the elements of a 2D array.
17. Differentiate between local and global variables.

18. Considering the following structure declaration, calculate the total memory (in bytes) that would be required by the structure variable:

```
struct book
{
    int book_id;
    char book_name[5];
    float book_price;
}b[2];
```

(2 x 6 = 12 Weight)

PART C
Answer any 2 question

19. Write a program that demonstrates how arrays can be passed to functions.
20. Write a program that performs read and write operations of numbers on files with sequential access functions.
21. Using recursion, write the code to accept a limit 'n' and display Fibonacci series upto 'n'.
22. Explain the structure of a C program with an example.

(5 x 2 = 10 Weight)