Second Semester FYUGP Computer Science Examination
APRIL 2025 (2024 Admission onwards)
KU2DSCCSC108 (ADVANCED PROGRAMMING WITH C)
(DATE OF EXAM: 28-4-2025)

Time : 90 min   Maximum Marks : 50

Part A (Answer any 6 questions. Each carries 2 marks)

1. Write the syntax to define a structure named Employee with members id, name, and salary.   **2**

2. How do you access the value stored at a memory location using a pointer?   **2**

3. What is the significance of & and * in pointers?   **2**

4. How does realloc() help in resizing dynamically allocated memory?   **2**

5. What are the actual parameters in a function? Explain with example   **2**

6. Differentiate between ' r ', ' r+ ', ' w ' and ' w+ ' modes in file operations.   **2**

7. What does the ftell() function return?   **2**

8. Which header file is used to accept a variable number of arguments in C by a function?   **2**

Part B (Answer any 4 questions. Each carries 6 marks)

9. Explain the concept of a structure in C. How is a structure declared and initialized? Provide an example program to illustrate structure declaration and initialization.
   6

10. Write a program using pointers to determine the length of a character string.   **6**

11. Write a C program that demonstrates the use of malloc() and free(). Explain how memory is allocated and deallocated.   **6**

12. Write a program to calculate the sum of an array by passing it as a parameter to a function.   **6**

13. Compare sequential access and random access in file handling. Which functions are used for random access?   **6**

14. Compare text file and binary file handling in C. Give examples.   **6**

Part C (Answer any 1 question(s). Each carries 14 marks)

15. Write a C program to demonstrate passing an array as a function parameter and performing matrix addition.   **14**

16. Write a program to store and display employee details (name, ID, salary, department) using an array of structures.   14