Reg No:..... K25FY2423 C
Name :.....

Second Semester FYUGP Computer Science Examination
APRIL 2025 (2024 Admission onwards)
KU2DSCCSC108 (ADVANCED PROGRAMMING WITH C)
(DATE OF EXAM: 02-05-2025)

Time : 90 min Maximum Marks : 50

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

1. What is the difference between structure and union? 2
2. Write a code snippet to access and print the values of union members. 2
3. What is the difference between arr[i] and *(arr + i)? 2
4. How do you declare a pointer variable in C? Provide an example. 2
5. What will be the output of 4* - *p2 / *p1 + 10 if *p1=12 and *p2=4 2
6. Explain the difference between malloc() and calloc(). 2
7. What are the actual parameters in a function? Explain with example 2
8. Explain the difference between sequential access and random access in file handling. 2

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

9. Explain how an array of structures is used in C. Write a C program to store and display details of 3 students (name, roll number, and marks) using an array of structures. 6
10. Write a C program using a union to store and display student information (ID as int, marks as float). Explain the output. 6
11. Write a program to access array elements using pointers. 6
12. Compare and contrast static memory allocation and dynamic memory allocation. In which scenarios should dynamic memory allocation be preferred? 6
13. Write a program to calculate the sum of an array by passing it as a parameter to a function. 6
14. Illustrate fseek() and ftell() by creating a file named “input.txt” in read mode. 6

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

15. Explain file operations in C with suitable examples. Discuss how to open, close, read, write, and append data to a file. 14
16. What is recursion? Explain with examples how it simplifies certain types of problems 14