Reg. No.:	
Name :	

# Second Semester B.Sc. Degree (CBCSS – OBE-Regular/Supplementary/ Improvement) Examination, April 2024 (2019 Admission Onwards) CORE COURSE IN COMPUTER SCIENCE/COMPUTER SCIENCE WITH AI & ML

2B02CSC: Advanced C Programming

Time: 3 Hours Max. Marks: 40

# PART- A

Short Answer. Answer all questions.

- 1. What are the command line arguments?
- 2. Differentiate static and dynamic memory allocations.
- 3. What is pointer?
- 4. What is structure?
- 5. Write the syntax of a creating a file in C.
- 6. What is the purpose of preprocessor?

 $(6 \times 1 = 6)$ 

PART - B

Short Essay. Answer any 6 questions.

- 7. Why we need user defined functions?
- 8. How to declare and initialize pointer variable in C?
- 9. Give an example for nesting of functions.
- 10. How to allocate block of memory during runtime?
- 11. What is the use of static variables?

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- 12. How to compare two structure variables?
- 13. How to declare and initialize a string variable?
- 14. Write syntax and example for fscanf().

 $(6 \times 2 = 12)$ 

# PART - C

Essay. Answer any 4 questions.

- 15. Explain storage classes in C.
- 16. Explain the role of pointers in functions.
- 17. What is Macro? Explain macros with arguments with proper example.
- 18. What are the dynamic memory management functions in C? Explain its usage.
- 19. What are the various modes of opening a file in C?
- 20. Differentiate call by value and call by reference.

 $(4 \times 3 = 12)$ 

#### PART - D

Long Essay. Answer any 2 questions.

- 21. Explain the concept of user-defined functions in C programming and discuss the various forms and categories of functions with examples.
- 22. Write a C program that utilizes an array of structures to store information about individuals, including their name, age and height. The program should prompt the user to input details for individuals and then print out the collected data.
- 23. Write C program to search a number in an array and display its position.
- 24. Discuss file operations in C programming in detail. (2x5=10)

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