A–8842	Sub. Code
	4BCE1C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

Computer science

PROGRAMMING IN C

(CBCS 2014 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is meant by 'Value' of a variable?

2. How is getchar( ) used in a program?

3. Differentiate between break and continue statements.

4. What is the purpose of array initialisation?

5. Write the limitations of using getchar and scanf functions for reading strings.

6. Distinguish between Actual and formal arguments.

7. What is meant by Array of structures?

8. Distinguish between (*m) [5] and *m [5].

9. What is the significance of E of ?

10. Distinguish between # if def and # if directives.

Part B $(5 \times 5 = 25)$

Answer **all** the questions.

11. (a) Explain the structure of a 'C' program.

Or

(b) What are the various arithmetic, logical and relational operators in 'C'? Explain with an example.

12. (a) Write the general form of for statement in 'C'. Explain its functions with an example.

Or

(b) Write a 'C' program to compute the sum of individual digits of a given number.

13. (a) Write a 'C' program to copy one string to another and count the number of characters copied.

Or

(b) Write a 'C' program that uses a function to sort an array of integers.

14. (a) Explain the meaning and purpose of the following:

(i) Template

(ii) Tag

(iii) Size of

(iv) Struct.

Or

(b) Write a 'C' program using pointers to determine the length of a character string.

15. (a) What is the difference between the functions Malloc( ) Calloc ( )? Explain .

Or

(b) Explain the role of 'C' preprocessor.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. What are the fundamental data types supported by 'C' How are they declared? Give examples?

17. Write a 'C' program to perform matrix multiplication.

18. The Fibonacci numbers are defined recursively as follows.

$F1=1$

$F2=1$

$Fn=Fn-1+Fn-2 \quad n>2.$

Write a function that will generate and print the first 'n' Fibonacci numbers.

19. Write a 'C' program using pointers to read an array of integers and print its element is reverse order.

20. Write a 'C' program to illustrate error handling in file operations.

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