



C20-EE-306

**7250**

**BOARD DIPLOMA EXAMINATION, (C-20)**

**FEBRUARY/MARCH — 2022**

**DEEE - THIRD SEMESTER EXAMINATION**

**PROGRAMMING IN C**

*Time : 3 hours ]*

*[ Total Marks : 80*

**PART—A**

3×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List any three variables of different data types in C.
2. List any six characters that are used in C.
3. State the importance of ternary operator.
4. What is nested loop? Give any two examples.
5. Give the declaration and initialization of a 2D array to store float values in 2 rows and 3 columns.
6. Give the syntax, purpose and example of strcat() function.
7. Why the data type void is used in C in dealing with functions?
8. Write a sample function in C to make use of any two auto variables.
9. Give three differences between union and structure.
10. List any six unconditional pre-processor directives available in C.

\*

**PART—B**

8×5=40

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11.** (a) Explain relational and logical operators with their precedence in C programming.

**(OR)**

- (b) Explain the compound assignment operators and decrement operators of C.

- 12.** (a) Explain the working of switch statement with syntax and example.

**(OR)**

- (b) Describe the working of do-loop with syntax and example.

- 13.** (a) Write a C program to find the sum of two matrices.

**(OR)**

- (b) Write a C program using strcpy() and strlen() string handling functions.

- 14.** (a) Write a function to check for prime or not using function without arguments and without return values. Call it in main function.

**(OR)**

- (b) Write a C program using recursive function to find factorial of N.

\*

15. (a) Explain the declaration, initialization and accessing the value of a pointer in C with examples.

(OR)

- (b) Explain the declaration, initialization and accessing the members of a structure in C with examples.

**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and criterion for valuation is the content but not the length of the answer.

16. Justify your answer in writing a function to find the GCD of two variables to use or not use recursion. If yes, write the recursive function to find GCD of two numbers otherwise write a non-recursive function to find GCD of two numbers.

★ ★ ★

\*