**6436**

**BOARD DIPLOMA EXAMINATION, (C-16)**

**JUNE/JULY—2022**

**DECE - FOURTH SEMESTER EXAMINATION**

PROGRAMMING IN C AND MATLAB

*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.   Give the syntax for scanf() function.

2.   Give the operator precedence in C.

3.   List any three conditional statements supported by C.

4.   Give the syntax for break statement in C.

\*    5.   List any three functions used for reading strings.

6.   How to print a string using printf()?

7.   What is the importance of . (dot) operator with respect to structures?

8.   List any two differences between structure and union.

9.   List any three differences between C and MATLAB.

10.   List any three data types in MATLAB.

## PART—B

**Instructions :** (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. *(a)* Explain the increment and decrement operators with examples. 8

*(b)* List four bit wise operators in C. 2

12. Explain while loop and do-while loops in C. 10

13. Write a C program to multiply two matrices. 10

14. Explain passing parameters to the function with an example. 10

15. Explain string manipulation functions strcat(), strchr(), strcmp(), strcpy(). 10

16. Explain how to declare a structure and its initialization with an example. 10

17. *(a)* Explain the use of a union.

*(b)* State the use of any three preprocessor directives with examples. 10

*

18. Explain the matrix operations addition, subtraction, multiplication and transpose of a $2 \times 2$ matrix in MATLAB with example. 10

★ ★ ★