

**6436**  
**BOARD DIPLOMA EXAMINATION**  
**MARCH/APRIL - 2019**  
**DIPLOMA IN ELECTRONICS AND COMMUNICATION ENGINEERING**  
**PROGRAMMING IN C & MATLAB**  
**FOURTH SEMESTER EXAMINATION**

**Time: 3 Hours**

**Total Marks: 80**

**PART - A (3m x 10 = 30m)**

*Note 1: Answer all questions and each question carries 3 marks*

*2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences*

1. List the bitwise operators in C
2. Write the syntax for declaring and initialization of a variable in C
3. Write the syntax of if-else statement in C
4. What is nesting of loops in C.?
5. Write any three differences between address operator (&) and dereferencing operator (\*)
6. State the use of return statement
7. List any three pre-processor directives?
8. Write the declaration of *structure* variable?
9. What are the uses of simulink?
10. State the significance of MATLAB over other high level languages?

**PART - B (10m x 5 = 50m)**

*Note 1: Answer any five questions and each carries 10 marks*

\* *2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer*

11. a) Explain increment and decrement operators in C  
b) Describe various type conversion techniques in C.
12. (a) Write any three differences between *while* loop and *do-while* loop in C  
(b) Write a C program to find the sum of following series using *for* loop  

$$1^2+3^2+5^2+\dots+n^2$$
13. Write a C program to perform multiplications of two matrices
14. Write about the following string functions.  
(a) `getchar()` (b) `getch()` (c) `getche()` (d) `putchar()`

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15. Explain about pointer arithmetic operations with suitable examples
  16. Explain about the declaring and initializing *structure*?
  17. Write a short notes on
    - a. `#include`
    - b. `#define`
    - c. `#ifdef`
    - d. `#if`
    - e. `#elseif`
  18. Write short notes on the following operators in MATLAB
    - (a) Arithmetic
    - (b) Relational
    - (c) Logical
    - (d) Bit-wise logical
- UNIT-5/Group2

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