



C16-EC-402

**6436**

**BOARD DIPLOMA EXAMINATION, (C-16)**  
**MARCH/APRIL—2018**  
**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. Write about increment and decrement operators in C language.
2. List the logical operators used in C language with symbols.
3. List three iterative statements supported by C language.
4. Write a C program to check that given number is even or odd.
5. Write three uses of functions.
6. Write the operation of getchar( ), getch( ), and putchar( ) functions.
7. Define a union.
8. Write the syntax to access members of a structure with examples.
9. List relational operators used in MATLAB.
10. What is the usage of control system tool box in MATLAB?

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**PART—B**

10×5=50

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

- 11.** (a) List and explain the arithmetic operators in C language. 5  
(b) Write a C program to find area of triangle. 5
- 12.** (a) Explain while statement with syntax and example. 5  
(b) Write a C program to find the sum of the series : 5  
$$1^2 \quad 2^2 \quad \dots \quad n^2$$
- 13.** Write a C program for multiplication of two matrices.
- 14.** Write the operations of following string manipulation functions :  
(a) strcat()  
(b) strcmp()  
(c) strcpy()  
(d) strlen()  
(e) strncmp()
- 15.** (a) Explain passing parameters to the function. 4  
(b) Write a program for exchange of two numbers using pass by reference techniques. 6
- 16.** Explain any five pre-processor commands.
- 17.** Explain declaration and initialization of structures.
- 18.** Explain plot commands (a) plot (x,y), (b) title (), (c) xlabel (), (d) ylabel () (e) legend () in MATLAB.

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