



**2022/TDC/ODD/SEM/  
CSCSEC-501T/094**

**TDC (CBCS) Odd Semester Exam., 2022**

**COMPUTER SCIENCE  
( 5th Semester )**

Course No. : CSCSEC-501T

**( Programming in MATLAB )**

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

**UNIT—I**

**1. Answer any three of the following questions :**

**1×3=3**

- (a) What is machine code?
- (b) What is ALU?
- (c) Mention the current version of MATLAB.
- (d) What is MATLAB constant?



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2. Answer any *one* of the following questions : 2

- (a) How are arrays used in MATLAB? Give example.
- (b) Write down the uses of MATLAB.

3. Answer any *one* of the following questions : 5

- (a) Explain the structure of MATLAB program.
- (b) Write a MATLAB program to calculate area of a circle.

UNIT—II

4. Answer any *three* of the following questions :  
1×3=3

- (a) Write down the function of load.
- (b) Which command is used for plotting the graph?
- (c) What is the function of save?
- (d) How are waveforms formed?

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5. Answer any *one* of the following questions : 2

- (a) Briefly define some frequently used built-in functions to plot a graph.
- (b) Mention the steps to generate waveforms.

6. Answer any *one* of the following questions : 5

- (a) Explain the procedure to plot a graph in MATLAB. 5
- (b) (i) Create a script file to plot the function  $y = x^2$ . 2
- (ii) Create a script file to plot  $\sin(x)$  and  $\cos(x)$  in a single graph. 3

UNIT—III

7. Answer any *three* of the following questions :  
1×3=3

- (a) What are two kinds of program files?
- (b) What are decision-making statements?
- (c) What is switch statement?
- (d) What is nested loop?



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8. Answer any *one* of the following questions : 2

- (a) What are the types of loops that MATLAB provides?
- (b) Explain briefly different input-output statements used in MATLAB.

9. Answer any *one* of the following questions : 5

- (a) How are strings handled in MATLAB? Explain with example. 5
- (b) Create a script file to perform the following :  $2\frac{1}{2} \times 2 = 5$ 
  - (i) Multiply two matrices
  - (ii) Transpose of a matrix

UNIT—IV

10. Answer any *three* of the following questions :

1×3=3

- (a) Write down the purpose of f printf()?
- (b) Which command is used to output files in MATLAB?
- (c) Which command is used to identify files?
- (d) What is break statement?

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11. Answer any *one* of the following questions : 2

- (a) How can polynomial be represented in MATLAB?
- (b) What is the type of program files that MATLAB allows to write?

12. Answer any *one* of the following questions : 5

- (a) (i) How do you write to a text file in MATLAB? 2
- (ii) Explain the purpose of fprintf function. Give syntax. 3
- (b) How can you sort a vector in a random manner in MATLAB? Explain with example. 5

UNIT—V

13. Answer any *three* of the following questions :

1×3=3

- (a) How is GUI used in MATLAB?
- (b) What is the function of sort (A), if A is a vector?
- (c) What is rand function?
- (d) What is the use of rng command?

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( Turn Over )



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14. Answer any *one* of the following questions : 2

(a) How to randomize a list of numbers?

(b) How to attach button to action in MATLAB?

15. Answer any *one* of the following questions : 5

(a) Explain the steps to create a simple GUI using push buttons, static text and pop-up menu.

(b) Explain different controls that are used to design user interface in MATLAB.

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