

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Fourth Semester)

Branch - MATHEMATICS

DISCIPLINE SPECIFIC ELECTIVE – II : MATLAB

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 _____ window creates and debugs script and function files.
(i) Workspace (ii) Editor
(iii) Command (iv) Help
- 2 _____ refers to the elements in all the columns of row n of the matrix A.
(i) A(n,:) (ii) A(:,n)
(iii) A(m:n,:) (iv) A(:,m:n)
- 3 To print a newline in a fprintf statement, which one of the escape character is must
(i) \t (ii) \nl
(iii) \nxt (iv) \n
- 4 In Matlab, this keyword immediately moves to the next iteration of the loop
(i) update (ii) goto
(iii) break (iv) continue
- 5 Which of the following is an assignment operator in matlab?
(i) '+' (ii) '='
(iii) '**' (iv) '\$'

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a State on rules about variable names.
OR
b Explain about transpose operator. Illustrate the same with example.
- 7 a List out built-in functions for handling arrays.
OR
b Write a short note on types of array division.
- 8 a Define output commands.
OR
b Explain plot of a function through examples.
- 9 a Define polar plots and illustrate with an example.
OR
b Explain how to save a function file.
- 10 a List out logical built-in functions in MATLAB.
OR
b Sketch the structure of the if-elseif-else-end conditional statement.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Explain in detail about the working process in the command window.
OR
b Discuss briefly on creating one dimensional and two-dimensional arrays.
- 12 a Explain strings and strings as variables with example.
OR
b List out the built-in functions for analyzing arrays.
- 13 a Discuss about the input to a script file.
OR
b Briefly explain on plotting multiple graphs in the same plot.
- 14 a Discuss about histograms.
OR
b Explain Anonymous and inline function.
- 15 a Explain loops in detail.
OR
b A worker is paid according to his hourly wage up to 40 hours, and 50% more for overtime. Write a program in a script file that calculates the pay to a worker. The program asks the user to enter the number of hours and the hourly wage. The program then displays the pay.

Z-Z-Z

END