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(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2024 ONLY)

24PMS1E1

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS: NOVEMBER-2024
COURSE NAME: M.Sc.-MATHEMATICS **MAXIMUM MARKS: 75**
SEMESTER: I **TIME: 3 HOURS**

MATLAB

SECTION A (10 X 1=10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS. **K1**

1. If a _____is typed at the end of a command the output of the command is not displayed.

   a) Colon (☺ b) Semi Colon (;) c) Period (.) d) Percentage (%)

2. The function can accept data through_____.
   a) Global variable b) local variable c) input argument d) output argument

3. _____ places the legend outside the axis.
   a) pos 0 b) pos 1 c) pos 2 d)pos 3

4. The conditional expression in the while loop command must include at least _____ variable.
   a) One b) two c) three d) four

5. The _____ function cannot pass through the origin.
   a) power b) exponential c) logarithmic d) reciprocal

ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES. K2

6. Write the order of precedence of the arithmetic operators.
7. Give the general syntax for feval command .
8. Write the syntax for meshgrid function.
9. When we will use the break statement.
10. Write the polyfit function form of $y = bx^{m}$.

SECTION- B (5 X 5=25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K3

11.a) Explain the array division in MATLAB.

(OR)

b) Using matrix operations solve the following system of linear equations.

$$4x - 2y + 6z = 8$$
$$2x + 8y + 2z = 4$$
$$6x + 10y + 3z = 0$$

(CONTD…..2)

12.a) Write a short note on the *disp* command.

(OR)

b) Describe the Anonymous function.

13.a) Explain the *fplot* command.

(OR)

b) Explain the syntax for making mesh and surface plots.

14.a) Explain relational operators.

(OR)

b) Explain the switch case statement.

15.a) Explain on finding the multiplication of two polynomials.

(OR)

b) Determine the function $w = f(t)$ (t is the independent variable, w is the dependent variable) with the polyfit function form for the following data points.

T	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
W	6.00	4.83	3.70	3.15	2.41	1.83	1.49	1.21	0.96	0.73	0.64

SECTION – C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K4 & K5

16.a) Explain with an example on how to addition , subtraction , multiplication and inverse of a matrix.

(OR)

b) Write short note on the working in the command window.

17.a) Write the compare between the script file and the function file.

(OR)

b) Describe the ffprintf command for saving output to a file.

18.a) Discuss on how the multiple plots are made on the same page.

(OR)

b) Explain the *view* command in three dimensional plots.

19.a) Explain logical operators with an example.

(OR)

b) Describe the three structures if-end, if-else-end and if-elseif-else-end of the if- statement.

20.a) Write a note on basic fitting interface.

(OR)

b) Explain the one dimensional interpolation .

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