

Department of Mathematics, School of Advanced Sciences
BMAT101P- Calculus for engineers-LAB-FAT-FALL SEM-2021-22

Slot: L23+L24

SET – 9

Time: 90 mins

1. Given the matrix of numbers $A = \begin{bmatrix} 10 & 11 & 12 & 13 \\ 20 & 21 & 22 & 23 \\ 30 & 31 & 32 & 33 \\ 40 & 41 & 42 & 43 \end{bmatrix}$ predict the outcome of the following using MATLAB commands and then check the results on the computer.
- a) Display second column elements (b) Display second row elements
 - c) Display second and third column elements (d) convert the Matrix A as a column matrix
 - e) Display the diagonal elements of the matrix. **[20M]**
2. Find the Taylor series Expansion of the function $f(x, y) = \tan^{-1}\left(\frac{y}{x}\right)$ in terms of x and y up to the terms of 3rd degree at the point $(1,1)$ **[20M]**
3. Write Matlab command with syntax, which enables a title for the x-axis (2m)
4. Write the syntax of Matlab command “sub plot” and also mention the purpose. (2m)
5. Write the command with syntax in Matlab for finding determinant of a matrix A (2m)
6. Write the command with syntax in Matlab to get an identity matrix of order 3 (2m)
7. What is the difference between commands “plot” and “ezplot” in Matlab (2m)