

QUIZ-01 (Time: 20 minutes): Marks-20

Math-217 (Advanced Mathematics)

IOT AND ROBOTICS ENGINEERING DEPARTMENT

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- 1) Find the eigenvalues and eigenvectors of A and A^2 and A^{-1} and $A + 4I$:**

$$A = \begin{pmatrix} 2 & -1 \\ -1 & 2 \end{pmatrix}$$

Check the trace $\lambda_1 + \lambda_2 = 4$ and the determinant $\lambda_1 \lambda_2 = 3$. For each case show the eigenvalues and eigenvectors in one graphical representation.