ENGINEERING MATH III (TH-I)

3rd SEM ELECTRICAL ENGG.

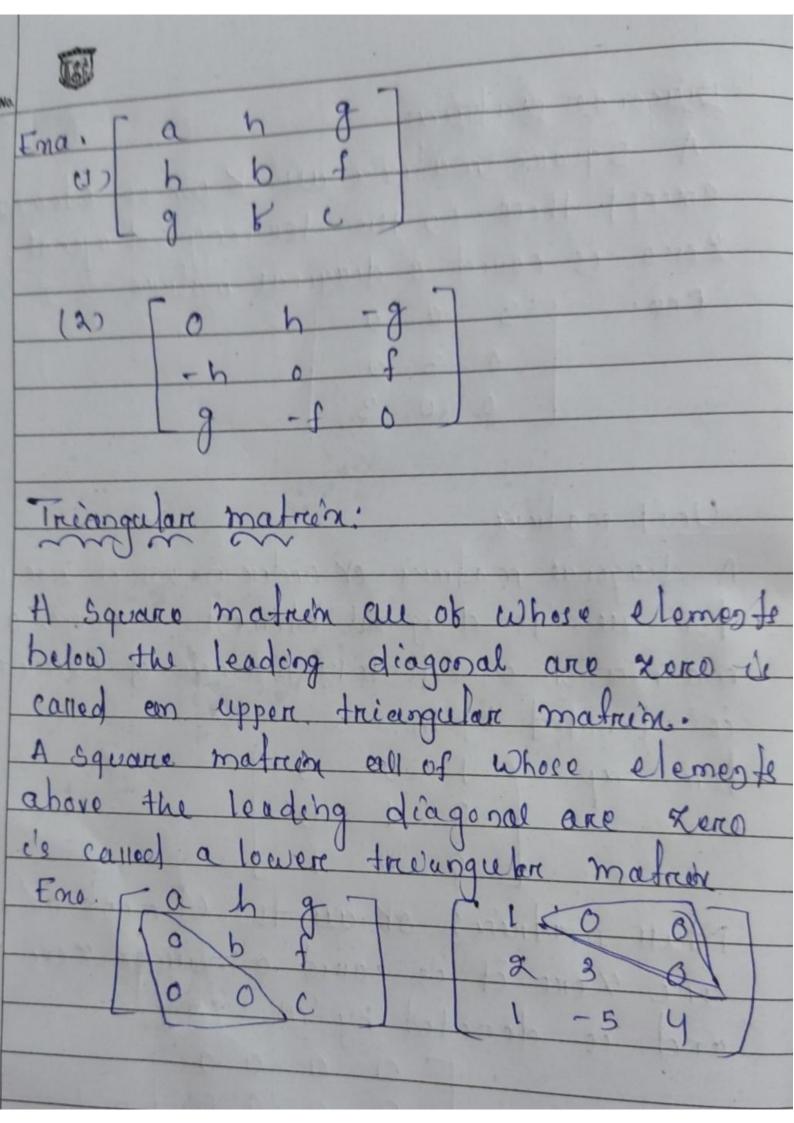
PREPAIRED BY:

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I shat i's matrix? A system of mo numbers corranged in a Rectangulare formation along in rows and Columns and bounded by the bracket [Called an m by n matriex. Which is Writ as mxn matrin. 7 2t i've aloss denoted by a single capita letter. Lyper of matrin: 1. Row Matrin A matrix having a single row is carred a now matricin. Ega. [1,3,5,7] 2. Column matria: A matrier having a common single comme is carred Column magrein. 3. Square matrin: A matrier having n rows and n columns is called Square matrein of order n. Eno.

A square madrin all ok whose elements encept those is the leading diagonal, are zero is called a diagonal matrix Ena [3 0 0 0 0 3 Unit matrix A diagonal matrix ox order n which has unity for all its diagonal element is called a unit matrix on an identity matrix of order n and is denoted by In for emp. [1 0 0] Null matrix: at all the element ob a matrix and is denoted by 'o' e'g [0 0 0 0]	Diagonal Martacha
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and is denoted by 'o' eg	
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symmetric and skow-symmetric matrices	Symmetric and skow-symmetric matrices
A square madrin A = [aij] de said to be	A square matrix A = [ai] de said to be
Symmetric When aij=ajè \ è & j	symmetrie when aij=aje V è & s



Rank of matriche: A matriche de said to be reagy to when (i) it has atteast one non xero minor of order T. Gie Everey minor of order higherethan re Vanisheefor or Determine the mask of the matrix (0) [1 operate R2-R1 1 2 3 0 2 -1 = A (Say) $|A| = \begin{vmatrix} 1 & 2 & 3 \\ 0 & 2 & -1 \end{vmatrix} = 1(-2+2)-2(0)+3(0)$ $0 & 2 & -1 \end{bmatrix} = 0$ N/0W 1 3 = 2 70 JCA)=2, hence the rank of the geven matroning