

SNS COLLEGE OF TECHNOLOGY (An Autonomous Institution) DEPARTMENT OF MATHEMATICS SOLUTIONS OF EQUATIONS AND EIGEN VALUE PROBLEM



Matrix innersion by Gause Jordan method. Let A be a non singular square moders then xsaid to be the invarie of A if Ax = I. ð. i) tind the Brocke of a matrix by game forday method sey, The augmented matter is gener by dr = UEI $\begin{bmatrix} n : \exists \end{bmatrix}_{2} \begin{pmatrix} 1 & 12 \\ 1 & 23 \\ 2 & 3 & 1 \\ 0 & 0 & 1 \end{pmatrix}$ - adolA The disect method fails if the al Ra ->R2-R1 Re - R - 2P1 Re - R - 2P1 An this care we have interchange room in the ter to get (ARTH) and the boy of the company of the second stands to a stand of the second stands to a stand of the second stands to a stand stand stands to a stand stand stands to a stand stand stand stands to a stand st ores north ach R's - mR3 - R2 (autoninil 3 $\begin{bmatrix} \mathbf{p} : \mathbf{T} \end{bmatrix}_{\mathbf{p} : \mathbf{h} : \mathbf{n} : \mathbf{h} : \mathbf{h}$



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 $(P; I) \sim \begin{pmatrix} 1 & 0 & 1 \\ 0 & 1 & 1 \\ 0 & 0 & -4 \\ 0 & 0 & -4 \\ -1 & -1 & 1 \end{pmatrix}_{2N}$ (21) $R_1 \longrightarrow 4R_1 + R_3$ $R_2 \longrightarrow 4R_2 + R_3$ $R_2 \longrightarrow 4R_2 + R_3$ $R_3 \longrightarrow R_2 \longrightarrow R_2 + R_3$ the arrive approximation of the dealers of the dealers and the second of the second of the dealers of the deale provide the set of new number other and draweld the other on efficience is there now. 14 1) Findue the Groups of $\begin{pmatrix} 0 & 0 \\ 1 & 0 \end{pmatrix}$ $\mathbf{A}^{-1} = \begin{pmatrix} 1 & 0 \\ 2 & 0 \\ 1 & 0 \end{pmatrix}$ •) find the inverse of $\begin{pmatrix} -15 & 6 & -5 \\ -5 & -2 & 2 \end{pmatrix}$ And $A^{-1} = \begin{pmatrix} 2 & 4 & 11 \\ -5 & 11 & 30 & 12 \\ 0 & 1 & 3 \end{pmatrix}$