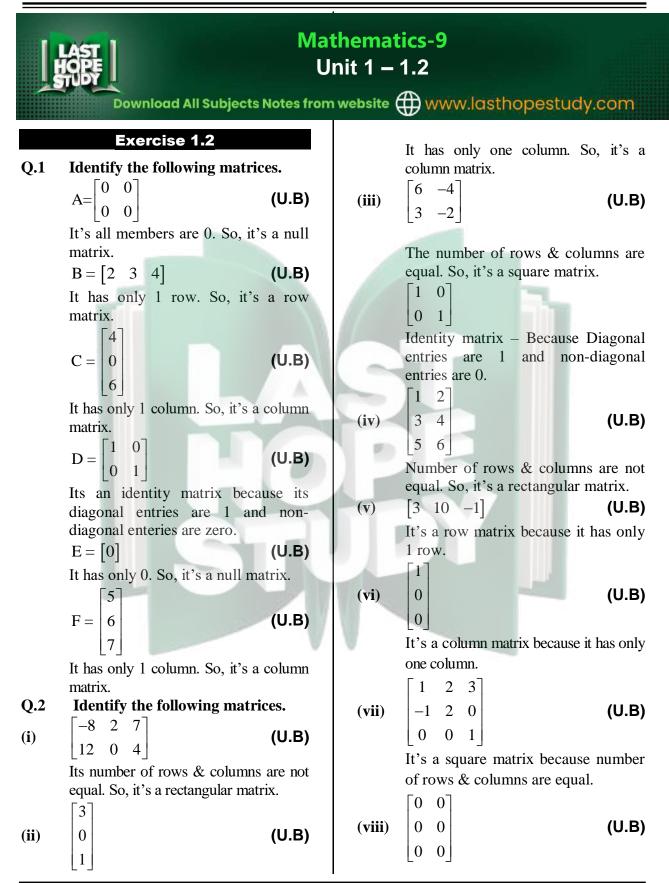
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It's a null matrix because all $-B = \begin{vmatrix} -3 & +1 \\ -2 & -1 \end{vmatrix}$ elements are 0. Q.3 Identify the matrices. $\mathbf{(3)} \qquad \mathbf{C} = \begin{vmatrix} 2 & 6 \\ 3 & 2 \end{vmatrix}$ $\mathbf{A} = \begin{bmatrix} 4 & 0 \\ 0 & 4 \end{bmatrix}$ (1) (U.B) $-C = -\begin{bmatrix} 2 & 6 \\ 3 & 2 \end{bmatrix}$ It's a scalar-matrix because it nondiagonal entries are 0 & diagonal $=\begin{bmatrix} -2 & -6\\ -3 & -2 \end{bmatrix}$ entries are same. $\mathbf{B} = \begin{bmatrix} 2 & 0 \\ 0 & -1 \end{bmatrix}$ $(4) \qquad \mathbf{D} = \begin{bmatrix} -3 & 2 \\ -4 & 5 \end{bmatrix}$ (2) (U.B) It's a diagonal matrix because its $-D = -\begin{bmatrix} -3 & 2 \\ -4 & 5 \end{bmatrix}$ non-diagonal entries are 0. $\mathbf{C} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ $= \begin{bmatrix} +3 & -2 \\ +4 & -5 \end{bmatrix}$ (3) (U.B) It's a unit matrix because diagonal- $(5) \qquad E = \begin{bmatrix} 1 & -5 \\ 2 & 3 \end{bmatrix}$ entries are 1. $\mathbf{D} = \begin{bmatrix} 3 & 0 \\ 0 & 0 \end{bmatrix}$ (4) (U.B) $-E = -\begin{bmatrix} 1 & -5 \\ 2 & 3 \end{bmatrix}$ It's a diagonal matrix because non- $=\begin{bmatrix} -1 & +5 \\ -2 & -3 \end{bmatrix}$ diagonal entries are 0. $\mathbf{E} = \begin{bmatrix} 5-3 & 0\\ 0 & 1+1 \end{bmatrix} = \begin{bmatrix} 2 & 0\\ 0 & 2 \end{bmatrix}$ (5) (U.B) Find the transpose. Q.5 0 It's a scalar matrix because diagonal A = 1 (1) entries are same. Find the negative of matrices. **Q.4** $A^{t} = \begin{bmatrix} 0 \\ 1 \\ -2 \end{bmatrix}^{t}$ $A = \begin{bmatrix} 0 \\ -1 \end{bmatrix}$ (A.B) (1) $A^t = \begin{bmatrix} 0 & 1 & -2 \end{bmatrix}$ $-A = - \begin{vmatrix} 1 & -1 \\ 0 & = \end{vmatrix} \begin{vmatrix} 0 \\ -1 & 1 \end{vmatrix}$ $B = \begin{bmatrix} 5 & 1 & -6 \end{bmatrix}$ (LHR 2019) (A.B) (2) $B^{t} = \begin{bmatrix} 5 & 1 & -6 \end{bmatrix}^{t}$ $\mathbf{B}^{\mathrm{t}} = \begin{bmatrix} 5\\1\\-6 \end{bmatrix}$ $(2) B = \begin{bmatrix} 3 & -1 \\ 2 & 1 \end{bmatrix}$ (A.B)

 $-B = -\begin{bmatrix} 3 & -1 \\ 2 & 1 \end{bmatrix}$

(A.B)

(A.B)

(A.B)

(A.B)

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