Q.1 Write the order of each of the following matrices. (5 Marks)

a)
$$\begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix}$$

b)
$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 8 & 10 \end{bmatrix}$$

$$d)\begin{bmatrix} 4 & 4 \\ 8 & 2 \\ 9 & 1 \end{bmatrix}$$

e)
$$\begin{bmatrix} 15 & 21 & 63 \\ 42 & 5 & 2 \\ 61 & 33 & 55 \end{bmatrix}$$

f)
$$\begin{bmatrix} 101 & 22 & 13 \\ 40 & 80 & 16 \end{bmatrix}$$

Q.2 In the matrix A...

$$\mathbf{A} = \begin{bmatrix} 3 & 5 & 1 & -2 \\ -5 & 1 & 3 & -4 \\ 3 & -2 & -3 & 2 \\ 1 & 8 & 1 & 7 \end{bmatrix}$$

Find

- a) Total Number Of Rows And Columns
- b) the order of the matrix \boldsymbol{A}
- c) the total number of elements in the matrix A
- d) A_{12} , A_{24} , A_{21} , A_{11} , A_{42} , A_{44} (4 Marks)
- Q.3 In the matrix A...

$$\mathbf{A} = \begin{bmatrix} 52 & 15 & 10 & -12 \\ -22 & 10 & 33 & -14 \\ 30 & -22 & -13 & 20 \\ 10 & 18 & 10 & 73 \end{bmatrix}$$

Find

- a) Total Number Of Rows And Columns
- b) the order of the matrix A
- c) the total number of elements in the matrix \boldsymbol{A}
- d) A₁₂ , A₂₄ , A₂₁ , A₁₁ , A₄₂ , A₄₄ (4 Marks)
- Q.4 In the matrix A...

$$\mathbf{A} = \begin{bmatrix} 1 & 2 & 2 & 2 \\ 6 & 3 & 5 & 4 \\ 3 & 2 & 3 & 0 \\ 2 & 1 & 0 & 3 \end{bmatrix}$$

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Chapter: 20

Find

- a) Total Number Of Rows And Columns
- b) the order of the matrix A
- c) the total number of elements in the matrix A
- d) A₁₂ , A₂₄ , A₂₁ , A₁₁ , A₄₂ , A₄₄ (4 Marks)
- Q.5 Construct a 2 \times 2 matrix whose elements in the i^{th} row and j^{th} column is given by
 - a) 2i + 5j
 - b) 3j + 4i (4 Marks)
- Q.6 If $A = \begin{bmatrix} 1 & 3 \\ -2 & 4 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 4 \\ -1 & 3 \end{bmatrix}$ and $C = \begin{bmatrix} -1 & 5 \\ 2 & 3 \end{bmatrix}$ then Find
 - a) B C
 - b) A (B + C)
 - c) C + (A B)
 - d) A + C
 - e) B (C + B) (5 Marks)
- Q.7 If $A = \begin{bmatrix} 2 & 1 \\ 2 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} -2 & 2 \\ 4 & 8 \end{bmatrix}$ then Find
 - a) (A + B)'
 - b) (A B)'
 - c) (A' + B)
 - d) (B' A)' (4 Marks)