1-Write the value of a_{12} for a 2X2 matrix , A = $[a_{ij}]$,whose element are given by $a_{ij} = \frac{i}{j}$

(CBSE-20211)

2-Write the order of the product of the matrix.(CBSE(F)-2011.)

$$\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} [2 \quad 3 \quad 4]$$

3-From the following matrix equation find the value of x . (CBSE-2010)

$$\begin{bmatrix} x+y & 4 \\ -5 & 3y \end{bmatrix} = \begin{bmatrix} 3 & 4 \\ -5 & 6 \end{bmatrix}$$

4-If $\begin{bmatrix} 3x\text{-}2y & 5 \\ x & \text{-}2 \end{bmatrix} = \begin{bmatrix} 3 & 5 \\ \text{-}3 & \text{-}2 \end{bmatrix}$,then find the value of y.   (CBSE(F)-2009)

5-Write a square matrix of order 2,which is symmetric and skew symmetric .(CBSE(F)-2010).

6-If a matrix A = $[1 \quad 2 \quad 3]$,then write $AA^{'}$, where $A^{'}$ is the transpose of matrix A

(CBSE-2009).

7-If the matrix A = $\begin{bmatrix} 0 & a & \text{-}3 \\ 2 & 0 & \text{-}1 \\ b & 1 & 0 \end{bmatrix}$ is skew matrix ,find the value of 'a' and'b'. (CBSE-2018)

8-If A is a square matrix such that $A^2 = A$,then write the value of $(I+A)^3$ -7A .(CBSE-2014)

9-If the matrix has 5 elements , write all possible orders it can have. (CBSE-2011)

10-Write the element of a_{23} of a 3 X 3 matrix A =(a_{ij}) whose elements are a_{ij} are given by

$a_{ij} = \frac{|i\text{-}j|}{2}$ (CBSE-2015)

11-Write the number of all possible matrices of order 2 X 2 with each entry 1 , 2 or 3. (CBSE-2016)

12-Find the matrix A such that 2A-3B +5C = O ,where B = $\begin{bmatrix} \text{-}2 & 2 & 0 \\ 3 & 1 & 4 \end{bmatrix}$ and C = $\begin{bmatrix} 2 & 0 & \text{-}2 \\ 7 & 1 & 6 \end{bmatrix}$

(CBSE-2019)

13-If A = $\begin{bmatrix} 0 & 2 \\ 3 & \text{-}4 \end{bmatrix}$ and kA = $\begin{bmatrix} 0 & 3a \\ 2b & 24 \end{bmatrix}$, then find the value of k,a and b .   (CBSE-2019)

14-Express A = $\begin{bmatrix} 4 & \text{-}3 \\ 2 & \text{-}1 \end{bmatrix}$ as a sum of a symmetric and skew symmetric matrix. (CBSE-2019)

15-Solve the following matrix equation for x : $[x \quad 1] \begin{bmatrix} 1 & 0 \\ \text{-}2 & 0 \end{bmatrix}$ = O (CBSE-2014)

16- If $2\begin{bmatrix} 3 & 4 \\ 5 & x \end{bmatrix} + \begin{bmatrix} 1 & y \\ 0 & 1 \end{bmatrix} = \begin{bmatrix} 7 & 0 \\ 10 & 15 \end{bmatrix}$, find $(x\text{-}y)$.   (CBSE-2014)

17- If A = $\begin{bmatrix} 2 & 4 \\ 3 & 2 \end{bmatrix}$ and B = $\begin{bmatrix} \text{-}2 & 5 \\ 3 & 4 \end{bmatrix}$, then find (3A – B) . (CBSE-2015)

18-If $\begin{bmatrix} 2 & 3 \\ 5 & 7 \end{bmatrix} \begin{bmatrix} 1 & \text{-}3 \\ \text{-}2 & 4 \end{bmatrix} = \begin{bmatrix} \text{-}4 & 6 \\ \text{-}9 & x \end{bmatrix}$, then write the value of x (CBSE-2012)

19- If A = $\begin{bmatrix} 3 & \text{-}3 \\ \text{-}3 & 3 \end{bmatrix}$ and $A^2 = \mu A$ then write the value of μ . (CBSE-2013)

20- Given matrix A = $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$, find f(A) , if f(x) = $2x^2$-3x $+ 5$.

21-If $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & -2 & 1 \\ 4 & 2 & 1 \end{bmatrix}$, **then show that** $A^3 - 23A - 40\,I = O$ **(CBSE-2023)**

22-Express the matrix $\begin{bmatrix} 2 & 3 & 1 \\ 1 & -1 & 2 \\ 4 & 1 & 2 \end{bmatrix}$ **as the sum of a symmetric and a skew symmetric matrix.**

23- If $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$ **, then find the value of** $A^2 - 3A + 2\,I$

24- If $A = \begin{bmatrix} 0 & 6 & 7 \\ -6 & 0 & 8 \\ 7 & -8 & 0 \end{bmatrix}$ **,** $B = \begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 2 \\ 1 & 2 & 0 \end{bmatrix}$ **,** $C = \begin{bmatrix} 2 \\ -2 \\ 3 \end{bmatrix}$ **,then calculate AC , BC , and (A+B)C .Also**

verify (A+B)C = AC + BC. **(CBSE-2015)**

25- A manufacturer produces three products x, y , z which he sells in two markets .Annual sales are indicated in the table:

Market	Products		
	x	y	z
I	10,000	2,000	18,000
II	6,000	20,000	8,000

If unit sale price of x , y ,z are $\mathrm{Rs}\,.\,2.50$ **, Rs 1.50 and Rs 1.00 respectively the find the total revenue of each market ,using matrices.**

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