.

Set 1: Question No 1	Set 1: Question No 2	Set 1: Question No 3
State the order of matrix $A = \begin{bmatrix} 5 & 6 & 1 \\ 0 & 2 & 9 \end{bmatrix}$	If A = $\begin{bmatrix} 2 & 3 \\ 4 & 7 \end{bmatrix}$, B = $\begin{bmatrix} 1 & 3 \\ 4 & 6 \end{bmatrix}$, find 2A + 3B	If A = $\begin{bmatrix} 2 & -1 \\ 4 & 3 \end{bmatrix}$, B = $\begin{bmatrix} 3 & -2 \\ -1 & 4 \end{bmatrix}$, find the matrix 'X' such that 2A + X = B
Recall/ Remembering	Understanding	Application
a) 2×3	a) $\begin{bmatrix} 5 & 12 \\ 16 & 25 \end{bmatrix}$	b) $\begin{bmatrix} -1 & 0 \\ -9 & 2 \end{bmatrix}$
c) 3×2	b) $\begin{bmatrix} 7 & 15 \\ 20 & 32 \end{bmatrix}$	b) $\begin{bmatrix} 1 & 0 \\ 9 & 2 \end{bmatrix}$
d) 3×3	c) $\begin{bmatrix} 5 & 12 \\ 12 & 20 \end{bmatrix}$	c) $\begin{bmatrix} 1 & 0 \\ -9 & -2 \end{bmatrix}$
e) 2×2	d) $\begin{bmatrix} 3 & 6 \\ 8 & 13 \end{bmatrix}$	d) $\begin{bmatrix} -1 & 0 \\ -9 & -2 \end{bmatrix}$
Ans: <a>	Ans: <b>	Ans: <d>

Set 2: Question No 1	Set 2: Question No 2	Set 2: Question No 3
In Matrices, which of the following is true 1. A+B=B+A 2. A+(B+C)=(A+B)+C 3. $k \times [a_{ij}] = [k \times a_{ij}]$	If A = $\begin{bmatrix} 5 & 3 \\ -1 & 1 \end{bmatrix}$, find 2A – 3I	Find the value of x and y satisfying the equation $\begin{bmatrix} 1 & x & 0 \\ y & 2 & 4 \end{bmatrix} + \begin{bmatrix} 3 & 4 & 2 \\ -1 & 3 & 2 \end{bmatrix} = \begin{bmatrix} 4 & 2 & 2 \\ 1 & 5 & 6 \end{bmatrix}$
Recall/ Remembering	Understanding	Application
a) Only 1 and 2	a) $\begin{bmatrix} 7 & 3 \\ -5 & -1 \end{bmatrix}$	a) x = 2 , y = 2
b) Only 1 and 3	b) $\begin{bmatrix} 13 & 9 \\ -1 & 5 \end{bmatrix}$	b) x = -2 , y = 2
c) Only 2 and 3	c) $\begin{bmatrix} 7 & 6 \\ -2 & -1 \end{bmatrix}$	c) x = 2 , y = - 2
d) All of them	d) $\begin{bmatrix} 13 & 6 \\ -2 & 5 \end{bmatrix}$	d) x = -2 , y = -2
Ans: <d>	Ans: <c>	Ans: <b>

Q 1	Q 2	Q 3	Q 4	Q 5
If $A = \begin{bmatrix} 2 & -3 \\ 4 & 0 \\ -1 & -2 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 \\ 6 & -1 \\ 0 & 3 \end{bmatrix}$ find $2A + 3B$.	If A = $\begin{bmatrix} 2 & -1 \\ 4 & 3 \end{bmatrix}$, B = $\begin{bmatrix} 3 & -2 \\ -1 & 4 \end{bmatrix}$, find the matrix 'X' such that A – B + 2X = 0	If A = $\begin{bmatrix} 2 & 3 \\ 4 & 7 \end{bmatrix}$, B = $\begin{bmatrix} 1 & 3 \\ 4 & 6 \end{bmatrix}$, Evaluate 2A + 3B – 4I	If $A = \begin{bmatrix} 4 & 2 & -5 \\ -3 & 0 & 9 \end{bmatrix}$; $B = \begin{bmatrix} 3 & 8 & 1 \\ 2 & 3 & -1 \end{bmatrix}$ find X such that $A + X = B$	Decide whether the matrix $\begin{bmatrix} 1 & 2 & -2 \\ -1 & 3 & 0 \\ 0 & -2 & 1 \end{bmatrix}$ Is singular?
Recall/ Remembering	Understanding	Understanding	Understanding	Application
a) $\begin{bmatrix} 7 & 0 \\ 26 & 3 \\ -2 & -5 \end{bmatrix}$	a) $\begin{bmatrix} 1/2 & -1/2 \\ -5/2 & 1/2 \end{bmatrix}$	a) $\begin{bmatrix} 3 & 12 \\ 16 & 28 \end{bmatrix}$	a) $\begin{bmatrix} 7 & 10 & -4 \\ -1 & 3 & 8 \end{bmatrix}$	a) no
b) $\begin{bmatrix} 7 & 0 \\ 26 & -3 \\ -2 & 5 \end{bmatrix}$	b) $\begin{bmatrix} -1/2 & 1/2 \\ 5/2 & -1/2 \end{bmatrix}$	b) $\begin{bmatrix} 3 & 15 \\ 20 & 28 \end{bmatrix}$	b) $\begin{bmatrix} 1 & -6 & -6 \\ -5 & -3 & 10 \end{bmatrix}$	b) yes
c) $\begin{bmatrix} 7 & 0 \\ 26 & -3 \\ 2 & 5 \end{bmatrix}$	c) $\begin{bmatrix} 2 & -2 \\ -10 & 2 \end{bmatrix}$	c) $\begin{bmatrix} 11 & 20 \\ 28 & 36 \end{bmatrix}$	c) $\begin{bmatrix} -1 & 6 & 6 \\ 5 & 3 & -10 \end{bmatrix}$	c) can't decide
d) $\begin{bmatrix} 7 & 0 \\ 26 & 3 \\ -2 & 5 \end{bmatrix}$	d) $\begin{bmatrix} -2 & 2 \\ 10 & -2 \end{bmatrix}$	d) $\begin{bmatrix} 11 & 15 \\ 16 & 36 \end{bmatrix}$	d) $\begin{bmatrix} 1 & -6 & -6 \\ 5 & 3 & 10 \end{bmatrix}$	
Ans: <b>	Ans: <a>	Ans: <b>	Ans: <c>	Ans: <a>

Set 1: Question No 1	Set 1: Question No 2	Set 1: Question No 3
State the order of the product matrix A×B if matrix A is of order 2×3 and matrix B is of order 3×3.	State the order of the product matrix B× A if matrix A is of order 2× 2 and matrix B is of order 3×3.	State the order of transpose of matrix $\begin{bmatrix} 2 \\ 0 \\ -1 \end{bmatrix}$
Recall/ Remembering	Understanding	Application
a) 3× 3	a) 2×2	a) 2×1
b) 2×2	b) 3×2	b) 1×2
c) 2×3	c) 3×3	c) 1×3
d) 3×2	d) product does not exist	d) 3×1
Ans: <c>	Ans: <d >	Ans: <c >

Set 2: Question No 1	Set 2: Question No 2	Set 2: Question No 3
Which of the following is true in matrices? 1. $A \times B = B \times A$ 2. $(A \times B)^t = B^t \times A^t$	If A = $\begin{bmatrix} 1 & 0 \\ 1 & -1 \end{bmatrix}$ $then\ A^2 = ?$	If $A = \begin{bmatrix} 1 & 0 \\ -1 & 1 \end{bmatrix}, B = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$ then to find a matrix 'X' such that AX = B, order of X should be .....
Recall/ Remembering	Understanding	Understanding
a) Only 1	a) $\begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix}$	a) 2×2
b) Only 2	b) $\begin{bmatrix} 1 & 0 \\ 2 & 1 \end{bmatrix}$	b) 2×3
c) Both	c) $\begin{bmatrix} 1 & 0 \\ 1 & -1 \end{bmatrix}$	c) 3×2
d) none	d) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$	d) 3×3
Ans: <b>	Ans: <d>	Ans: <b>

Q 1	Q 2	Q 3	Q 4	Q 5
If $A=\begin{bmatrix}2 & -1\\4 & 3\end{bmatrix}$, $B=\begin{bmatrix}3 & -2\\-1 & 4\end{bmatrix}$, find AB	If $A=\begin{bmatrix}2 & -1\\4 & 3\end{bmatrix}$, $B=\begin{bmatrix}3 & -2\\-1 & 4\end{bmatrix}$, find BA	If $A=\begin{bmatrix}2 & -1\\4 & 3\end{bmatrix}$, Find A^2	If $A=\begin{bmatrix}2 & -1\\4 & 3\end{bmatrix}$, $B=\begin{bmatrix}3 & -2\\-1 & 4\end{bmatrix}$, find $(AB)^T$	If $A=\begin{bmatrix}2 & -1\\4 & 3\end{bmatrix}$, $B=\begin{bmatrix}3 & -2\\-1 & 4\end{bmatrix}$, find B^TA^T
Recall/ Remembering	Understanding	Understanding	Understanding	Understanding
a) $\begin{bmatrix}5 & -8\\15 & 4\end{bmatrix}$	a) $\begin{bmatrix}5 & -8\\15 & 4\end{bmatrix}$	a) $\begin{bmatrix}0 & -5\\-4 & 5\end{bmatrix}$	a) $\begin{bmatrix}5 & -8\\15 & 4\end{bmatrix}$	a) $\begin{bmatrix}5 & -8\\15 & 4\end{bmatrix}$
b) $\begin{bmatrix}7 & -8\\9 & 4\end{bmatrix}$	b) $\begin{bmatrix}7 & -8\\9 & 4\end{bmatrix}$	b) $\begin{bmatrix}0 & -5\\20 & 5\end{bmatrix}$	b) $\begin{bmatrix}7 & -8\\9 & 4\end{bmatrix}$	b) $\begin{bmatrix}7 & -8\\9 & 4\end{bmatrix}$
c) $\begin{bmatrix}7 & 9\\-8 & 4\end{bmatrix}$	c) $\begin{bmatrix}7 & 9\\-8 & 4\end{bmatrix}$	c) $\begin{bmatrix}8 & -5\\20 & 5\end{bmatrix}$	c) $\begin{bmatrix}7 & 9\\-8 & 4\end{bmatrix}$	c) $\begin{bmatrix}7 & 9\\-8 & 4\end{bmatrix}$
d) $\begin{bmatrix}-2 & -9\\14 & 13\end{bmatrix}$	d) $\begin{bmatrix}-2 & -9\\14 & 13\end{bmatrix}$	d) $\begin{bmatrix}4 & 1\\16 & 9\end{bmatrix}$	d) $\begin{bmatrix}-2 & -9\\14 & 13\end{bmatrix}$	d) $\begin{bmatrix}-2 & -9\\14 & 13\end{bmatrix}$
Ans: <b>	Ans: <d>	Ans: <b>	Ans: <c>	Ans: <c>

Set 1: Question No 1	Set 1: Question No 2	Set 1: Question No 3
State the formula of A^{-1}	Find inverse of A = $\begin{bmatrix} -1 & 1 & 1 \\ -2 & 2 & 2 \\ 3 & 2 & 1 \end{bmatrix}$	The solution X of the matrix equation $A \times X = B$ is given by
Recall/ Remembering	Understanding	Application
a) $A^{-1} = Adj\ A$	a) $A^{-1} = \begin{bmatrix} -2 & -1 & 0 \\ -8 & -4 & 0 \\ -10 & -5 & 0 \end{bmatrix}$	a) $X = A^{-1} \times \mathrm{B}$
b) $A^{-1} = \frac{-1}{\det A} \times Adj\ A$	b) $A^{-1} = \begin{bmatrix} -2 & -8 & -10 \\ -1 & -4 & -5 \\ 0 & -5 & 0 \end{bmatrix}$	b) $X = \mathrm{B} \times A^{-1}$
c) $A^{-1} = [c_{ij}]^t$	c) $A^{-1} = \begin{bmatrix} -2 & 1 & 0 \\ 8 & -4 & 0 \\ -10 & 5 & 0 \end{bmatrix}$	c) $X = A \times \mathrm{B}$
d) $A^{-1} = \frac{1}{\lvert A \rvert} \times Adj\ A$	d) Inverse does not exist.	d) $X = \mathrm{B} \times \mathrm{A}$
Ans: <d>	Ans: <d>	Ans: <a>

Set 2: Question No 1	Set 2: Question No 2	Set 2: Question No 3
The inverse of the matrix A is given by	The cofactors are given by the formula	For solving simultaneous equations the matrix equation is AX=B. Here matrix B is
Recall/ Remembering	Understanding	Recall/ Remembering
a) $A^{-1} = Adj\ A$	a) $c_{ij} = (-1)^{i+j} \times M_{ij}$ Where M_{ij} is a minor	a)row matrix of constants
b) $A^{-1} = \frac{1}{\|A\|} \times Adj\ A$	b) $c_{ij} = (-1)^{i+j} \times M_{ji}$ Where M_{ji} is a minor	b)square matrix of coefficients
c) $A^{-1} = \frac{-1}{\|A\|} \times Adj\ A$	c) $c_{ij} = M_{ij}$ Where M_{ij} is a minor	c)column matrix of variables
d) $A^{-1} = A \times Adj\ A$	d) none of above	d)column matrix of constants
Ans: <b>	Ans: <a>	Ans: <d>

Q 1	Q 2	Q 3	Q 4	Q 5
If A = $\begin{bmatrix} 2 & -1 \\ 4 & 3 \end{bmatrix}$, find A^{-1}.	Using matrix method, solve the simultaneous equations x+y+z=6 ; x-y+2z=5 ; 2x+y-z=1	Find the inverse of the matrix: $A = \begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$	If A= $\begin{bmatrix} -1 & 1 & 1 \\ 2 & 4 & 2 \\ 3 & 2 & 1 \end{bmatrix}$ then find Adj A	Using matrix method, solve the simultaneous equations 2x+y-z=3; x-2y+3z=1; 3x+y+2z=1
Recall/ Remembering	Application	Application	Understanding	Application
a) $\frac{1}{10} \times \begin{bmatrix} 3 & -1 \\ 4 & 2 \end{bmatrix}$	a)x= 1, y=2, z=-3	a) $\begin{bmatrix} 1 & -1 & 0 \\ -2 & 3 & -4 \\ -2 & 3 & -3 \end{bmatrix}$	a) $\begin{bmatrix} 0 & 1 & -2 \\ 4 & -4 & 4 \\ -8 & 5 & -6 \end{bmatrix}$	a) x= 1, y=2, z=1
b) $\frac{1}{10} \times \begin{bmatrix} -3 & -1 \\ 4 & -2 \end{bmatrix}$	b) x= -1, y=2, z=-3	b) $\frac{1}{5} \times \begin{bmatrix} 1 & -1 & 0 \\ -2 & 3 & -4 \\ -2 & 3 & -3 \end{bmatrix}$	b) $\frac{-1}{4} \times \begin{bmatrix} 0 & 1 & -2 \\ 4 & -4 & 4 \\ -8 & 5 & -6 \end{bmatrix}$	b) x= 23/14, y=-3/2, z=-17/14
c) $\frac{1}{10} \times \begin{bmatrix} 3 & 1 \\ -4 & 2 \end{bmatrix}$	c) x= 1, y=-2, z=-3	c) $\frac{1}{11} \times \begin{bmatrix} 1 & -1 & 0 \\ -2 & 3 & -4 \\ -2 & 3 & -3 \end{bmatrix}$	c) $\frac{-1}{4} \times \begin{bmatrix} 0 & -1 & -2 \\ -4 & -4 & -4 \\ -8 & -5 & -6 \end{bmatrix}$	c) x= 23/14, y= 3/2, z=-17/14
d) $\begin{bmatrix} 3 & 1 \\ -4 & 2 \end{bmatrix}$	d) x= 1, y=2, z=3	d) $\begin{bmatrix} 1 & 1 & 0 \\ 2 & 3 & 4 \\ -2 & -3 & -3 \end{bmatrix}$	d) Does not exist	d) No Solution
Ans: <c>	Ans: <d>	Ans: <a>	Ans: <a>	Ans: <b>