<Course Code:22103>: <Subject Code: BMS>: <Subject Name: Basic Mathematics>: <Matrices>:

<UO-1.3.1>: <Assessments>: <Formative>

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Assessment Type: Formative Assessments: Embedded questions in video

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>

Assessment Type: Summative: End of CO: in LMS

Summative: Q 1	Summative: Q 2	Summative: Q 3	Summative: Q 4	Summative: 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>

Assessment Type: Practice Worksheets: End of CO: in LMS/ downloadable PDF

A. If A=$\begin{bmatrix}3 & 2\\1 & -1\\0 & 4\end{bmatrix}$, B = $\begin{bmatrix}-1 & -1\\3 & 2\\4 & -2\end{bmatrix}$ verify that A + B = B + A	**B.** Find the values of x & y such that $\begin{bmatrix}2x+1 & -1\\3 & 4y\end{bmatrix}+\begin{bmatrix}-1 & 6\\0 & 3\end{bmatrix}=\begin{bmatrix}4 & 5\\3 & 12\end{bmatrix}$
A. Answer Space	**B. Answer Space**
C. If X = $\begin{bmatrix}1 & 2\\-3 & 4\end{bmatrix}$, Y = $\begin{bmatrix}4 & 5\\1 & -3\end{bmatrix}$, Z = $\begin{bmatrix}7 & 11\\-8 & 9\end{bmatrix}$ then show that 3X + Y = Z	**D.** If A = $\begin{bmatrix}x & 2 & -5\\3 & 1 & 2y\end{bmatrix}$, B = $\begin{bmatrix}2y+5 & 6 & -15\\9 & 3 & -6\end{bmatrix}$ and if 3A = B then find x and y

C. Answer Space	**D. Answer Space**
E. If $A=\begin{bmatrix} 2 & 3 \\ -1 & 5 \end{bmatrix}, B=\begin{bmatrix} 1 & 2 \\ -1 & 0 \end{bmatrix}$ then find $2A-4B+3I$	**F.** If $A=\begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix}, B=\begin{bmatrix} 1 & -1 \\ 3 & -2 \end{bmatrix}, C=\begin{bmatrix} 0 & -1 \\ 1 & -1 \end{bmatrix}$ Verify that (A + B) + C = A + (B + C)

E. Answer Space	**F. Answer Space**
G. If $A=\begin{bmatrix}2 & -3\\ 3 & 4\end{bmatrix}$, $B=\begin{bmatrix}4 & 5\\ 3 & -2\end{bmatrix}$, $C=\begin{bmatrix}3 & -1\\ 0 & 6\end{bmatrix}$ then find $3A + 4B - 2C$	H. Decide whether the matrix $\begin{bmatrix}1 & 2 & -1\\ 2 & 1 & -2\\ -1 & -2 & 3\end{bmatrix}$ is non-singular?

G. Answer Space	H. Answer Space