

RIZ MUGHAL

QUIZ MASTER

MATH401(38 TO 40)

100% correct solution.

For more information you can visit my channel and for any type of help related to CS619 you can contact me.



YOUTUBE CHANNEL:

<https://www.youtube.com/channel/UCINsFwDiB62SValCcPDZbRQ/playlists>

Question # 1 of 10 (Start time: 11:37:34 AM, 28 August 2020)

Vectors $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$ and $\begin{pmatrix} -66 \\ 99 \end{pmatrix}$ are linearly -----

Select the correct option

<input checked="" type="radio"/>	Dependent
<input type="radio"/>	Independent

Riz Mughal

Question # 2 of 10 (Start time: 11:37:57 AM, 28 August 2020)

Total

The equation form of non - homogeneous system of differential equations is

$$X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$$

Select the correct option

[Reload Math Equ](#)

<input checked="" type="radio"/>	$\begin{aligned} X' &= -2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= -2x - 4y + e^t - 4t \\ X' &= 3x + 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y - e^t - 4t \\ X' &= 3x - 4y - 11t \end{aligned}$

Riz Mughal

R

Question # 3 of 10 (Start time: 11:38:33 AM, 28 August 2020)

$$A = \begin{bmatrix} 1 & 5 & 3 \\ 2 & 4 & 7 \end{bmatrix} \text{ and } B = \begin{bmatrix} 0 & 2 & 1 \\ 3 & 5 & 6 \\ 8 & 7 & 5 \end{bmatrix}$$

then the order of matrix

Select the correct option

[Reload](#)

<input type="radio"/>	3×3
<input checked="" type="radio"/>	2×3
<input type="radio"/>	3×2
<input type="radio"/>	None of them

Riz Mughal

R

Question # 4 of 10 (Start time: 11:39:09 AM, 28 August 2020)

Total M

Vectors $\begin{pmatrix} 1 \\ 0 \end{pmatrix}$ and $\begin{pmatrix} 0 \\ 1 \end{pmatrix}$ are linearly -----.

Select the correct option

[Reload Math Equ](#)

<input type="radio"/>	Dependent
<input checked="" type="radio"/>	Independent

Riz Mughal

R

Question # 5 of 10 (Start time: 11:39:43 AM, 28 August 2020)

The multiplicative identity of a 3×3 matrix is

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | $\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 0 \\ 1 & 1 & 1 \end{bmatrix}$ |
| <input type="radio"/> | $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$ |
| <input type="radio"/> | $\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix}$ |
| <input checked="" type="radio"/> | $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ |
- Riz Mughal*

Question # 6 of 10 (Start time: 11:40:19 AM, 28 August 2020)

$$A = \begin{bmatrix} 1 \\ 2 \end{bmatrix}, B = \begin{bmatrix} 1 \\ -1 \end{bmatrix}, \text{so } AB =$$

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | 1 |
| <input checked="" type="radio"/> | 2 |
| <input type="radio"/> | 3 |
| <input type="radio"/> | 4 |
- Riz Mughal*
- R*

Question # 7 of 10 (Start time: 11:41:07 AM, 28 August 2020)

Total M

Matrix form of the following system of non - homogenous differential equations is

$$\frac{dy}{dx} = -2x + 4y + e^t - 4t$$

$$\frac{dy}{dx} = 3x - 4y + 11t$$

Select the correct option

[Reload Math Equa](#)

- Riz Mughal*
- $X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$
- $X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} e^t + 4 \\ e^t - 11 \end{bmatrix}$
- $X' = \begin{bmatrix} -2 & x \\ 3 & y \end{bmatrix} \begin{bmatrix} 4 \\ -4 \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$
- $X' = \begin{bmatrix} x & 4 \\ y & -4 \end{bmatrix} \begin{bmatrix} 2 \\ 3 \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$

Question # 8 of 10 (Start time: 11:42:14 AM, 28 August 2020)

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}, k \text{ is a constant then}$$

Select the correct option

- | | |
|----------------------------------|--------------|
| <input type="radio"/> | $A = kA$ |
| <input checked="" type="radio"/> | $Ak = kA$ |
| <input type="radio"/> | $-Ak = Ak$ |
| <input type="radio"/> | $Ak \neq kA$ |
- Riz Mughal*
- R*

Question # 9 of 10 (Start time: 11:42:53 AM, 28 August 2020)

Total Marks

If $K = \begin{bmatrix} 1 \\ -1 \end{bmatrix}$ is an eigenvector of the given matrix $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ then AK is

Select the correct option

[Reload Math Equation](#)

<input checked="" type="radio"/>	$1K$
<input type="radio"/>	$-1K$
<input type="radio"/>	1
<input type="radio"/>	-1

Riz Mughal

R

Question # 10 of 10 (Start time: 11:43:31 AM, 28 August 2020)

The matrix form of non - homogeneous system of differential equations

$$X' = -3x + 4y - 9z$$

$$X' = 6x - y$$

$$X' = 10x - 4y + 3z$$

Select the correct option

[Reload Mat](#)

<input type="radio"/>	$X' = \begin{bmatrix} 6 & 0 & -1 \\ -3 & 4 & -9 \\ 10 & -4 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix}$
<input checked="" type="radio"/>	$X' = \begin{bmatrix} 6 & -1 & 0 \\ -3 & 4 & -9 \\ 10 & -4 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix}$
<input type="radio"/>	$X' = \begin{bmatrix} 6 & -1 & y \\ -3 & 4 & z \\ 10 & -4 & x \end{bmatrix} \begin{bmatrix} 0 \\ 3 \\ x \end{bmatrix}$
<input type="radio"/>	$X' = \begin{bmatrix} 0 & 6 & 0 \\ -3 & 4 & -9 \\ 10 & -4 & 3 \end{bmatrix} \begin{bmatrix} y \\ x \\ z \end{bmatrix}$

Riz Mughal

R

2nd account

Question # 1 of 10 (Start time: 11:52:00 AM, 28 August 2020)

The multiplicative identity of a 3×3 matrix is

Select the correct option

 Reload

<input type="radio"/>	$\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 0 \\ 1 & 1 & 1 \end{bmatrix}$
<input type="radio"/>	$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$
<input type="radio"/>	$\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix}$
<input checked="" type="radio"/>	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

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R

Question # 2 of 10 (Start time: 11:52:41 AM, 28 August 2020)

This equation

$$\det(A - \lambda I)$$

is known as _____ of the matrix A.

Select the correct option

<input type="radio"/>	Linear equation
<input type="radio"/>	Algebraic equation
<input checked="" type="radio"/>	Characteristic equation
<input type="radio"/>	All of these

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R

Question # 3 of 10 (Start time: 11:53:08 AM, 28 August 2020)

Total Marks: 1

If A , B and C are three matrices of order $[A]_{m \times p}$, $[B]_{p \times r}$ and $[C]_{r \times n}$ then $A(BC) = (AB)C$,

Select the correct option

[Reload Math Equations](#)

- | | |
|----------------------------------|--------------|
| <input type="radio"/> | $n \times m$ |
| <input type="radio"/> | $m \times p$ |
| <input checked="" type="radio"/> | $m \times n$ |
| <input type="radio"/> | $p \times r$ |
- Riz Mughal*
- 

Question # 4 of 10 (Start time: 11:53:36 AM, 28 August 2020)

T

$$A = \begin{bmatrix} 1 \\ 2 \end{bmatrix}, B = \begin{bmatrix} 1 & -1 \end{bmatrix}, \text{so } AB =$$

Select the correct option

[Reload Math](#)

- | | |
|----------------------------------|---|
| <input type="radio"/> | 1 |
| <input checked="" type="radio"/> | 2 |
| <input type="radio"/> | 3 |
| <input type="radio"/> | 4 |
- Riz Mughal*
-

Question # 5 of 10 (Start time: 11:54:01 AM, 28 August 2020)

Total Mark

The equation form of non - homogeneous system of differential equation is

$$X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$$

Select the correct option

[Reload Math Equation](#)

- | | |
|----------------------------------|--|
| <input checked="" type="radio"/> | $\begin{aligned} X' &= -2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$ |
| <input type="radio"/> | $\begin{aligned} X' &= -2x - 4y + e^t - 4t \\ X' &= 3x + 4y + 11t \end{aligned}$ |
| <input type="radio"/> | $\begin{aligned} X' &= 2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$ |
| <input type="radio"/> | $\begin{aligned} X' &= 2x + 4y - e^t - 4t \\ X' &= 3x - 4y - 11t \end{aligned}$ |
- Riz Mughal*
- R*

Question # 6 of 10 (Start time: 11:54:38 AM, 28 August 2020)

Total

A matrix A is defined as

$$A = \begin{bmatrix} a & b \\ & \end{bmatrix}, k \text{ is a constant then}$$

Select the correct option

[Reload Math E](#)

<input type="radio"/>	$A = kA$
<input checked="" type="radio"/>	$Ak = kA$
<input type="radio"/>	$-Ak = Ak$
<input type="radio"/>	$Ak \neq kA$

Riz Mughal

R

Question # 7 of 10 (Start time: 11:55:44 AM, 28 August 2020)

If A is a $m \times n$ matrix and

$$A = A^T$$

. which of the following must always be true?

Select the correct option

<input type="radio"/>	$m \neq n$
<input checked="" type="radio"/>	$m = n$

Riz Mughal

R

Question # 8 of 10 (Start time: 11:56:28 AM, 28 August 2020)

The eigenvalues of matrix

$$A = \begin{pmatrix} 3 & 4 \\ -1 & 7 \end{pmatrix}$$

Select the correct option

- | | |
|----------------------------------|----------------------------------|
| <input checked="" type="radio"/> | $\lambda_1 = 5, \lambda_2 = 5$ |
| <input type="radio"/> | $\lambda_1 = 3, \lambda_2 = 7$ |
| <input type="radio"/> | $\lambda_1 = 5, \lambda_2 = -5$ |
| <input type="radio"/> | $\lambda_1 = -5, \lambda_2 = -5$ |
- Riz Mughal*
- R*

Question # 9 of 10 (Start time: 11:57:28 AM, 28 August 2020)

Total Marks

$$A = \begin{bmatrix} 1 & 5 & 3 \\ 2 & 4 & 7 \end{bmatrix} \text{ and } B = \begin{bmatrix} 0 & 2 & 1 \\ 3 & 5 & 6 \\ 8 & 7 & 5 \end{bmatrix}$$

then the order of matrix

Select the correct option

[Reload Math Equat](#)

- | | |
|----------------------------------|--------------|
| <input type="radio"/> | 3×3 |
| <input checked="" type="radio"/> | 2×3 |
| <input type="radio"/> | 3×2 |
| <input type="radio"/> | None of them |
- Riz Mughal*
- 

Question # 10 of 10 (Start time: 11:58:03 AM, 28 August 2020)

If

$$X_1 = \begin{pmatrix} e^{-2t} \\ -e^{-2t} \end{pmatrix}$$

Select the correct option

[Reloa](#)

- | | |
|-----------------------|--|
| <input type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |

Question # 10 of 10 (Start time: 11:58:03 AM, 28 August 2020)

$$\frac{d}{dt}(X_1)$$

= _____.

Select the correct option

[Reload](#)

- | | |
|----------------------------------|--|
| <input type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ ✓ |
| <input checked="" type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |

3rd account

Question # 1 of 10 (Start time: 06:27:05 PM. 28 August 2020)

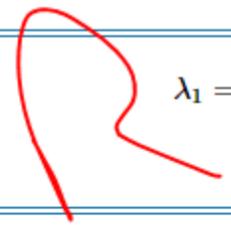
The eigenvalues of matrix

$$A = \begin{pmatrix} 3 & 4 \\ -1 & 7 \end{pmatrix}$$

Select the correct option

<input checked="" type="radio"/>	$\lambda_1 = 5, \lambda_2 = 5$
<input type="radio"/>	$\lambda_1 = 3, \lambda_2 = 7$
<input type="radio"/>	$\lambda_1 = 5, \lambda_2 = -5$
<input type="radio"/>	$\lambda_1 = -5, \lambda_2 = -5$

Riz Mughal



MTH401:Quiz No. 2

Question # 2 of 10 (Start time: 06:27:30 PM, 28 August 2020)

$$X_1 = \begin{pmatrix} e^{-2t} \\ -e^{-2t} \end{pmatrix}$$

then

Select the correct option

- | | |
|----------------------------------|--|
| <input type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |
| <input checked="" type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |
- Riz Mughal*
- R*

Question # 3 of 10 (Start time: 06:27:54 PM, 28 August 2020)

The equation form of non - homogeneous system of differential equati

$$X' = \begin{bmatrix} -2 & 4 \\ & \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ & \end{bmatrix} e^t + \begin{bmatrix} -4 \\ & \end{bmatrix} t$$

Select the correct option

<input checked="" type="radio"/>	$\begin{aligned} X' &= -2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= -2x - 4y + e^t - 4t \\ X' &= 3x + 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y - e^t - 4t \\ X' &= 3x - 4y - 11t \end{aligned}$

Question # 4 of 10 (Start time: 06:28:15 PM, 28 August 2020)

Vector $\begin{pmatrix} -1 \\ 0 \end{pmatrix}$ and $\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ are linearly -----.

Select the correct option

<input checked="" type="radio"/>	Dependent
<input type="radio"/>	Independent

Riz Mughal

Click to Save Answer & M

Question # 5 of 10 (Start time: 06:28:39 PM, 28 August 2020)

The matrix form of non - homogeneous system of differential equation

$$X' = -3x + 4y - 9z$$

$$X' = 6x - y$$

Select the correct option

- | | |
|----------------------------------|--|
| <input type="radio"/> | $X' = \begin{bmatrix} -3 & -9 & -4 \\ 6 & 0 & -1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$ |
| <input checked="" type="radio"/> | $X' = \begin{bmatrix} -3 & 4 & -9 \\ 6 & -1 & 0 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$ |
| <input type="radio"/> | $X' = \begin{bmatrix} -3 & 4 & x \\ 6 & -1 & y \end{bmatrix} \begin{bmatrix} -9 \\ 0 \end{bmatrix}$ |
| <input type="radio"/> | $X' = \begin{bmatrix} -3 & 4 & -9 \\ 0 & 6 & 0 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$ |

Question # 6 of 10 (Start time: 06:29:24 PM, 28 August 2020)

$$A = \begin{bmatrix} 1 \\ 2 \end{bmatrix}$$

$$B = \begin{bmatrix} 1 \\ -2 \end{bmatrix}, \text{ so } A + B = \text{\$}$$

Select the correct option

<input type="radio"/>	$\begin{bmatrix} 2 \\ 4 \end{bmatrix}$
<input checked="" type="radio"/>	$\begin{bmatrix} 2 \\ 0 \end{bmatrix}$
<input type="radio"/>	$\begin{bmatrix} 0 \\ 0 \end{bmatrix}$
<input type="radio"/>	Not possible.

Equation load ni ho rai thi

Question # 8 of 10 (Start time: 06:31:21 PM, 28 August 2020)

Let $A = \begin{bmatrix} a & b \end{bmatrix}$ and $B = \begin{bmatrix} u & v \end{bmatrix}$ then $A + B$ is

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | $A + B = \begin{bmatrix} au & bv \end{bmatrix}$ |
| <input checked="" type="radio"/> | $A + B = \begin{bmatrix} a + u & b + v \end{bmatrix}$ |
| <input type="radio"/> | $A + B = \begin{bmatrix} a + u & b + x \end{bmatrix}$ |
| <input type="radio"/> | $A + B = \begin{bmatrix} au & bx \end{bmatrix}$ |

Question # 9 of 10 (Start time: 06:32:27 PM, 28 August 2020)

If A , B and C are three matrices of order $[A]_{m \times p}$, $[B]_{p \times r}$ and $[C]_{r \times n}$ then $A(BC)$

Select the correct option

Rel

<input type="radio"/>	$n \times m$
<input type="radio"/>	$m \times p$
<input checked="" type="radio"/>	$m \times n$
<input type="radio"/>	$p \times r$

MTH401:Quiz No. 2

Question # 10 of 10 (Start time: 06:32:53 PM, 28 August 2020)

If A is a $m \times n$ matrix and

$$A = A^T$$

, which of the following must always be true?

Select the correct option

<input type="radio"/>	$m \neq n$
<input checked="" type="radio"/>	$m = n$

Riz Mughal

R

4th account

Question # 1 of 10 (Start time: 06:58:44 PM, 28 August 2020)

The non - trivial solution of the system of differential equation exist only when

Select the correct option

[Reload Ma](#)

<input type="radio"/>	$\det(X - \lambda I) = 0$
<input type="radio"/>	$\det(A - \lambda I) \neq 0$
<input type="radio"/>	$\det(A + \lambda I) = 0$
<input checked="" type="radio"/>	$\det(A - \lambda I) = 0$

Question # 2 of 10 (Start time: 06:59:09 PM, 28 August 2020)

If $K = \begin{bmatrix} 1 \\ -1 \end{bmatrix}$ is an eigenvector of the given matrix $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ then AK is

Select the correct option

[Reload Ma](#)

<input checked="" type="radio"/>	$1K$
<input type="radio"/>	$-1K$
<input type="radio"/>	1
<input type="radio"/>	-1

Question # 3 of 10 (Start time: 06:59:29 PM, 28 August 2020)

If

$$A = \begin{bmatrix} 1 & 5 & 3 \\ 2 & 4 & 7 \end{bmatrix} \text{ and } B = \begin{bmatrix} 0 & 2 & 1 \\ 3 & 5 & 6 \\ - & - & - \end{bmatrix}$$

Select the correct option

[Reload Mat](#)

<input type="radio"/>	3×3
<input checked="" type="radio"/>	2×3
<input type="radio"/>	3×2
<input type="radio"/>	None of them

Riz Mughal

MTH401:Quiz No. 2

Question # 4 of 10 (Start time: 06:59:45 PM, 28 August 2020)

This equation

$$\det(A - \lambda I)$$

is known as _____of the matrix A.

Select the correct option

<input type="radio"/>	Linear equation
<input type="radio"/>	Algebraic equation
<input checked="" type="radio"/>	Characteristic equation
<input type="radio"/>	All of these

Riz Mughal



Question # 5 of 10 (Start time: 07:00:07 PM, 28 August 2020)

$$\text{Let } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix} \text{ and } B = \begin{bmatrix} u & v \\ x & y \end{bmatrix} \text{ then } A + B \text{ is}$$

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | $A + B = \begin{bmatrix} au & bv \end{bmatrix}$ |
| <input checked="" type="radio"/> | $A + B = \begin{bmatrix} a + u & b + v \end{bmatrix}$ |
| <input type="radio"/> | $A + B = \begin{bmatrix} a + u & b + x \end{bmatrix}$ |
| <input type="radio"/> | $A + B = \begin{bmatrix} au & bx \end{bmatrix}$ |
- Riz Mughal*

Question # 6 of 10 (Start time: 07:00:28 PM, 28 August 2020)

Total M

If A , B and C are three matrices of order $[A]_{m \times p}$, $[B]_{p \times r}$ and $[C]_{r \times n}$ then $A(BC) = (AB)C$,

Select the correct option

[Reload Math Equa](#)

- | | |
|----------------------------------|--------------|
| <input type="radio"/> | $n \times m$ |
| <input type="radio"/> | $m \times p$ |
| <input checked="" type="radio"/> | $m \times n$ |
| <input type="radio"/> | $p \times r$ |

Question # 7 of 10 (Start time: 07:00:48 PM, 28 August 2020)

$$\begin{bmatrix} b_{11} \\ b_{21} \end{bmatrix}$$

Select the correct option

<input type="radio"/>	Row matrix
<input checked="" type="radio"/>	column Matrix

Riz Mughal

Question # 8 of 10 (Start time: 07:01:03 PM, 28 August 2020)

If

$$X_1 = \begin{pmatrix} e^{-2t} \\ -e^{-2t} \end{pmatrix}$$

Select the correct option

Rel

- | | |
|----------------------------------|--|
| <input type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ -2e^{-2t} \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} 2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |
| <input checked="" type="radio"/> | $\begin{pmatrix} -2e^{-2t} \\ 2e^{-2t} \end{pmatrix}$ |
- Riz Mughal*

MTH401:Quiz No. 2

Question # 9 of 10 (Start time: 07:01:21 PM, 28 August 2020)

If A is a $m \times n$ matrix and

$$A = A^T$$

, which of the following must always be true?

Select the correct option

<input type="radio"/>	$m \neq n$
<input checked="" type="radio"/>	$m = n$

Riz Mughal

Question # 10 of 10 (Start time: 07:01:31 PM, 28 August 2020)

The equation form of non - homogeneous system of differential equation is

$$X' = \begin{bmatrix} -2 & 4 \\ & \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ & \end{bmatrix} e^t + \begin{bmatrix} -4 \\ & \end{bmatrix} t$$

Select the correct option

Reload

<input checked="" type="radio"/>	$\begin{aligned} X' &= -2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= -2x - 4y + e^t - 4t \\ X' &= 3x + 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y - e^t - 4t \\ X' &= 3x - 4y - 11t \end{aligned}$

5th account

Question # 1 of 10 (Start time: 03:02:53 PM, 29 August 2020)

$$A = \begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}, B = \begin{bmatrix} 1 & -1 \end{bmatrix}, \text{so } AB =$$

Select the correct option

<input type="radio"/>	1
<input checked="" type="radio"/>	2
<input type="radio"/>	3
<input type="radio"/>	4

Question # 2 of 10 (Start time: 03:03:22 PM, 29 August 2020)

Vectors $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$ and $\begin{pmatrix} -66 \\ 99 \end{pmatrix}$ are linearly –

Select the correct option

<input checked="" type="radio"/>	Dependent
<input type="radio"/>	Independent

Riz Mughal

Question # 3 of 10 (Start time: 03:03:42 PM, 29 August 2020)

The matrix form of non - homogeneous system of differential equations

$$X' = -3x + 4y - 9z$$

$$X' = 6x - y$$

$$X' = 10x - 4y + 3z$$

Select the correct option

Rel

- | | |
|----------------------------------|--|
| <input type="radio"/> | $X' = \begin{bmatrix} -3 & -9 & -4 \\ 6 & 0 & -1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$ |
| <input checked="" type="radio"/> | $X' = \begin{bmatrix} -3 & 4 & -9 \\ 6 & -1 & 0 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$ |
| <input type="radio"/> | $X' = \begin{bmatrix} -3 & 4 & x \\ 6 & -1 & y \end{bmatrix} \begin{bmatrix} -9 \\ 0 \end{bmatrix}$ |
| <input type="radio"/> | $X' = \begin{bmatrix} -3 & 4 & -9 \\ 0 & 6 & 0 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$ |
- Riz Mughal

Question # 4 of 10 (Start time: 03:04:13 PM. 29 August 2020)

The eigenvalues of matrix

$$A = \begin{pmatrix} 3 & 4 \\ -1 & 7 \end{pmatrix}$$

Select the correct option

- | | |
|----------------------------------|----------------------------------|
| <input checked="" type="radio"/> | $\lambda_1 = 5, \lambda_2 = 5$ |
| <input type="radio"/> | $\lambda_1 = 3, \lambda_2 = 7$ |
| <input type="radio"/> | $\lambda_1 = 5, \lambda_2 = -5$ |
| <input type="radio"/> | $\lambda_1 = -5, \lambda_2 = -5$ |
- Riz Mughal*

Question # 5 of 10 (Start time: 03:04:35 PM, 29 August 2020)

The equation form of non - homogeneous system of differential equation is

$$X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$$

Select the correct option

Relo

<input checked="" type="radio"/>	$\begin{aligned} X' &= -2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= -2x - 4y + e^t - 4t \\ X' &= 3x + 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y + e^t - 4t \\ X' &= 3x - 4y + 11t \end{aligned}$
<input type="radio"/>	$\begin{aligned} X' &= 2x + 4y - e^t - 4t \\ X' &= 3x - 4y - 11t \end{aligned}$

Question # 6 of 10 (Start time: 03:05:00 PM, 29 August 2020)

Vector $\begin{pmatrix} -1 \\ 0 \end{pmatrix}$ and $\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ are linearly ----- .

Select the correct option

<input checked="" type="radio"/>	Dependent
<input type="radio"/>	Independent

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Click to Save Answer

Question # 7 of 10 (Start time: 03:05:20 PM, 29 August 2020)

This equation

$$\det(A - \lambda I)$$

is known as _____ of the matrix A.

Select the correct option

<input type="radio"/>	Linear equation
<input type="radio"/>	Algebraic equation
<input checked="" type="radio"/>	Characteristic equation
<input type="radio"/>	All of these

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Question # 8 of 10 (Start time: 03:05:31 PM, 29 August 2020)

$$\frac{dy}{dx} = -2x + 4y + e^t - 4t$$

$$\frac{dy}{dx} = 3x - 4y + 11t$$

Select the correct option

Rel

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- $X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$
- $X' = \begin{bmatrix} -2 & 4 \\ 3 & -4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} + \begin{bmatrix} e^t + 4 \\ e^t - 11 \end{bmatrix}$
- $X' = \begin{bmatrix} -2 & x \\ 3 & y \end{bmatrix} \begin{bmatrix} 4 \\ -4 \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$
- $X' = \begin{bmatrix} x & 4 \\ y & -4 \end{bmatrix} \begin{bmatrix} 2 \\ 3 \end{bmatrix} + \begin{bmatrix} 1 \\ 0 \end{bmatrix} e^t + \begin{bmatrix} -4 \\ 11 \end{bmatrix} t$

Question # 9 of 10 (Start time: 03:06:02 PM, 29 August 2020)

$$A = \begin{bmatrix} 1 \\ 2 \end{bmatrix}$$

$$B = \begin{bmatrix} 1 & 2 \\ 0 & 2 \end{bmatrix}$$

Select the correct option

Rel

<input type="radio"/>	$\begin{bmatrix} 2 \\ 4 \end{bmatrix}$
<input checked="" type="radio"/>	$\begin{bmatrix} 2 \\ 0 \end{bmatrix}$
<input type="radio"/>	$\begin{bmatrix} 0 \\ 0 \end{bmatrix}$
<input type="radio"/>	Not possible.

equation load ni ho rai thi ☹️

Question # 10 of 10 (Start time: 03:06:47 PM, 29 August 2020)

$$\text{Let } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix} \text{ and } B = \begin{bmatrix} u & v \\ x & y \end{bmatrix} \text{ then } A + B \text{ is}$$

Select the correct option



$$A + B = \begin{bmatrix} au & bv \end{bmatrix}$$



$$A + B = \begin{bmatrix} a + u & b + v \\ c + x & d + y \end{bmatrix}$$



$$A + B = \begin{bmatrix} a + u & b + x \end{bmatrix}$$



$$A + B = \begin{bmatrix} au & bx \end{bmatrix}$$

Riz Mughal