

VU QUIZ REPORT

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Subject: MTH401

Quiz Completed: 1/6/2026, 11:54:39 AM

Total Questions: 10

Mathematical Questions: 7

CROPPED Screenshots: 7

Question 1:

Question # 1 of 10 (Start time: 11:49:00 AM, 06 January 2026)

Total Marks: 1

Solution of the D.Equation

$$4y'' + y = 0.$$

is

Select the correct option

Reload Math Equations

☐	$y(x) = c_1 \cos \frac{x}{2}$
☐	None of them.
☐	$y(x) = c_1 \sin \frac{x}{2}$
☒	$y(x) = c_1 \cos \frac{x}{2} + c_2 \sin \frac{x}{2}$

You selected: D

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: D

Question 2:

Question # 2 of 10 (Start time: 11:50:09 AM, 06 January 2026)

Total Marks: 1

The infinite series $\sum_{n=1}^{\infty} \frac{(-1)^{n+2}}{n^3} (x+3)^n$, is a power series in x centered at

Select the correct option

Reload Math Equations

☐	-3
☐	3
☐	-2
☐	2

You selected: A

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: A

Question 3:

The velocity of a particle moving with simple harmonic motion is ----- at the mean position.

- A. Minimum
- B. Zero
- C. Maximum**
- D. None of these

Selected Answer: C

Question 4:

Question # 4 of 10 (Start time: 11:51:22 AM, 06 January 2026)

Total Marks: 1

Consider a power series:

$$1 - \frac{x^2}{2} + \frac{x^4}{24} - \dots$$

represents -----

Select the correct option

 Reload Math Equations

☐	$\ln x$
☐	$\sin x$
☐	e
☐	$\cos x$

You selected: D

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: D

Question 5:

The flow of current is _____ proportional to the resistance.

- A. inversely**
- B. directly
- C. Option C not found
- D. Option D not found

Selected Answer: A

Question 6:

Question # 6 of 10 (Start time: 11:52:18 AM, 06 January 2026)

Total Marks: 1

Consider a power series:

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n^2} x^n = x - \frac{x^2}{2^2} + \frac{x^3}{3^2} + \dots$$

, then the center of series is _____.

Select the correct option

Reload Math Equations

☐	1
☐	x
☐	0
☐	-2

You selected: C

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: C

Question 7:

Question # 7 of 10 (Start time: 11:52:46 AM, 06 January 2026)

Total Marks: 1

Ordinary differential equation $\left(\frac{dy}{dx}\right)^3 + \frac{d^2y}{dx^2} + y = 9$, is of order -----.

Select the correct option

Reload Math Equations

☐	3
☐	1
☐	2
☐	0

You selected: C

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: C

Question 8:

Question # 8 of 10 (Start time: 11:53:14 AM, 06 January 2026)

Total Marks: 1

The solution of

$$x \frac{dy}{dx} = 0$$

is -----.

Select the correct option

Reload Math Equations

☐	$y = c_1 + c_2 x^2$
☐	$y = c_1 + c_2 x$
☐	$y = c_1$
☐	none of them

You selected: C

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: C

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Question 9:

Question # 9 of 10 (Start time: 11:53:52 AM, 06 January 2026)

Total Marks: 1

Auxiliary equation of the differential equation

$$f x^2 \frac{d^2 y}{dx^2} + g x \frac{dy}{dx} + h y = k(x)$$

is

Select the correct option

 Reload Math Equations

☐	$f m^2 - (g - f)m + h = 0$
☐	$f m^2 + (g - f)m + h = 0$
☐	none of them
☐	$f m + (g - f)m^2 + h = 0$

You selected: B

Mathematical question (CROPPED screenshot - top 20% removed)

Selected Answer: B

Question 10:

How are frequency and period related in simple harmonic motion?

A. They are inversely related

B. Their sum is constant

C. They are directly related

D. None of the above

Selected Answer: A

Mathematical Questions Note:

Questions containing mathematical equations and symbols are displayed as CROPPED screenshots (top 20% removed for privacy) to preserve the original formatting. Your selected answers are displayed below each screenshot for easy reference.