MTH301 - Calculus II

MTH301 - Calculus II Quiz#2

100% Correct Solve (Alhamdulilah)

BY Virtual Assistance Sonu Ilyas Mughal

Sindh, Pakistan

03063548328

sonuilyasmughal@gmail.com

https://www.youtube.com/channel/UCjboEX65C_yN7as5di1OuIQ/playlists

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MTH301 - Calculus II

MTH301:Quiz#2

Question # 1 of 10 (Start time: 11:32:52 PM, 21 January 2021)

A single curve can be represented by

Select the correct option

- ○ Only one vector-valued function
- ○ Only two vector-valued function
- ◉ Infinitely many vector-valued function
- ○ None of these

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MTH301 - Calculus II

MTH301:Quiz#2

Quiz Start Time: 11:32 P

Question # 2 of 10 (Start time: 11:33:23 PM, 21 January 2021)

For a function $\vec{r}(t) = x(t)\hat{i} + y(t)\hat{j} + z(t)\hat{k}$ in 3 - space we define $\lim_{t\to\alpha} \vec{r}(t) =$ _____.

Select the correct option

Reloa

- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j}$
- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + z(t)\hat{k}$
- $x(t)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + \left(\lim_{t\to\alpha} z(t)\right)\hat{k}$
- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + \left(\lim_{t\to\alpha} z(t)\right)\hat{k}$

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Question # 3 of 10 (Start time: 11:33:46 PM, 21 January 2021)

$$\int_0^{\frac{\pi}{2}} \sin^2\theta \; d\theta = \text{---------}$$

Select the correct option

- $\frac{1}{2}$
- $\frac{1}{2} \cdot \frac{\pi}{2}$
- $\frac{1}{3} \cdot \frac{\pi}{2}$
- $\frac{2}{3}$

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MTH301 - Calculus II

MTH301:Quiz#2 Quiz Start Time: 11:3

Question # 4 of 10 (Start time: 11:34:11 PM, 21 January 2021)

The vector $\vec{r}$ is continuous at t_0 if _____.

Select the correct option

Re

- (a) $\vec{r}(t_0)$ is defined.
- (b) $\lim_{t \to t_0} \vec{r}(t)$ exist.
- (c) $\lim_{t \to t_0} \vec{r}(t) = \vec{r}(t_0)$.
- (d) All (a), (b) and (c).

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MTH301:Quiz#2

Quiz Start Time: 11:32 PM

Question # 5 of 10 (Start time: 11:34:35 PM, 21 January 2021)

If $\vec{r}(t) = x(t)\hat{i} + y(t)\hat{j}$ is a vector - valued function in 2 - space, and if $x(t)$ and $y(t)$ are differentiable, then $\frac{d}{dt}[\vec{r}(t)] =$ _____.

Select the correct option

Reload

- $x'(t)\hat{i} + y'(t)\hat{j}$
- $x'(t)\hat{i} + y(t)\hat{j}$
- $x(t)\hat{i} + y'(t)\hat{j}$
- $x'(t)\hat{i} + y'(t)\hat{j} + z'(t)\hat{k}$

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MTH301:Quiz#2 Quiz

Question # 6 of 10 (Start time: 11:34:58 PM, 21 January 2021)

A smooth vector-valued function has a _____ line at every point on its graph.

Select the correct option

- curved
- secant
- tangent
- straight

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MTH301:Quiz#2 Quiz Start Time: 11:3

Question # 7 of 10 (Start time: 11:35:25 PM, 21 January 2021)

Let G be the rectangular box defined by the inequalities $a \leqslant x \leqslant b, \quad c \leqslant y \leqslant d, \quad e \leqslant z \leqslant f$. If f is continuous on G, then $\int_a^b \int_c^d \int_e^f f(x,\ y,\ z)\, dz\ dy\ dx =$

Select the correct option

Rel

- $\int_c^d \int_a^b \int_e^f f(x,\ y,\ z)\, dz\ dx\ dy$
- $\int_a^b \int_e^f \int_c^d f(x,\ y,\ z)\, dy\ dz\ dx$
- $\int_e^f \int_a^b \int_c^d f(x,\ y,\ z)\, dy\ dx\ dz$
- All three options are true.

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Quiz Start Time: 11:32 P

Question # 8 of 10 (Start time: 11:36:17 PM, 21 January 2021)

A vector valued function in 3 - D can be expressed as

Select the correct option

Reload

- $\vec{r}(t) = x(t) + y(t) + z(t)$
- $\vec{r}(t) = x(t)i + y(t)j + z(t)k$
- $\vec{r}(t) = x(t)j + y(t)i + z(t)k$
- $\vec{r}(t) = x(t) - y(t) - z(t)$

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MTH301:Quiz#2 Quiz Start Time:

Question # 9 of 10 (Start time: 11:36:36 PM, 21 January 2021)

Polar co - ordinates of a point are $\left(-4, \frac{-3\pi}{2}\right)$. Which of the following is another possible polar co - ordinates representation of this point?

Select the correct option

- $\left(4, \frac{\pi}{4}\right)$
- $\left(4, \frac{-\pi}{2}\right)$
- $\left(4, \frac{-\pi}{3}\right)$
- $\left(4, \frac{3\pi}{4}\right)$

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MTH301:Quiz#2 Quiz Start Time:

Question # 10 of 10 (Start time: 11:36:55 PM, 21 January 2021)

Polar co - ordinates of a point are $\left(5, \frac{-\pi}{4}\right)$. Which of the following is another possible polar co - ordinates representation of this point?

Select the correct option

○	$\left(5, \frac{3\pi}{4}\right)$
○	$\left(-5, \frac{-3\pi}{4}\right)$
●	$\left(-5, \frac{3\pi}{4}\right)$
○	$\left(5, \frac{-3\pi}{4}\right)$

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MTH301 - Calculus II

MTH301:Quiz#2

Quiz Start Time: 07:08 PM, 21

Question # 1 of 10 (Start time: 07:08:38 PM, 21 January 2021)

In 2D - space the parametric equations $x = x(t), y = y(t)$ can be expressed in single vector equationas

Select the correct option

Reload Ma

- $\vec{r}(t) = x(t) + y(t)$
- $\vec{r}(t) = x(t)j + y(t)i$
- $\vec{r}(t) = x(t) - y(t)$
- [x] $\vec{r}(t) = x(t)i + y(t)j$

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MTH301 - Calculus II

MTH301:Quiz#2

Quiz Start Time: 07:08 PM

Question # 2 of 10 (Start time: 07:08:58 PM, 21 January 2021)

Let G be the rectangular box defined by the inequalities $a \leqslant x \leqslant b, \quad c \leqslant y \leqslant d, \quad e \leqslant z \leqslant f$. If f is continuous on G, then $\int_a^b \int_c^d \int_e^f f(x,\ y,\ z)\, dz\ dy\ dx =$ -

Select the correct option

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- $\int_c^d \int_a^b \int_e^f f(x,\ y,\ z)\, dz\ dx\ dy$
- $\int_a^b \int_e^f \int_c^d f(x,\ y,\ z)\, dy\ dz\ dx$
- $\int_e^f \int_a^b \int_c^d f(x,\ y,\ z)\, dy\ dx\ dz$
- All three options are true.

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MTH301 - Calculus II

MTH301:Quiz#2

Quiz Start Time: 07:08 PM,

Question # 3 of 10 (Start time: 07:09:19 PM, 21 January 2021)

The equation $r = a\,\theta$ represents - - - - - - - - - , where a is positive.

Select the correct option

Reload

- lemniscate
- cardioid
- spiral
- rose curve

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Question # 4 of 10 (Start time: 07:09:38 PM, 21 January 2021)

The arc length of the curver$(t) = t^3 i + tj + \frac{1}{2}\sqrt{6}t^2 k; 0 \leqslant t \leqslant 2$, can be written as

Select the correct option

○	$L = \int_0^2 \sqrt{9t^4 + 1 - 6t^2}\,dt$
○	$L = \int_0^2 \sqrt{9t^4 + 1 + 3t^2}\,dt$
○	$L = \int_0^2 \sqrt{9t^4 + 1 - 3t^2}\,dt$
●	$L = \int_0^2 \sqrt{9t^4 + 1 + 6t^2}\,dt$

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Question # 5 of 10 (Start time: 07:09:59 PM, 21 January 2021)

$$If\, x'(t), y'(t)\ and\ z'(t) are\ continuous, then\ the\ curve\ given\ by\ the\ parametric\ equation\ x = x(t),\ y = y(t),\ z = z(t)\ has\ arc\ length$$

Select the correct option

○	$L = \int_a^b \sqrt{x^2 + y^2 + z^2}\, dx dy dz$
○	$L = \int_a^b \sqrt{\frac{dx}{dt} + \frac{dy}{dt} + \frac{dz}{dt}}\, dt$
●	$L = \int_a^b \sqrt{\left(\frac{dx}{dt}\right)^2 + \left(\frac{dy}{dt}\right)^2 + \left(\frac{dz}{dt}\right)^2}\, dt$
○	None of these

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MTH301:Quiz#2 Quiz Start Time: 07

Question # 6 of 10 (Start time: 07:10:20 PM, 21 January 2021)

For a function $\vec{r}(t) = x(t)\hat{i} + y(t)\hat{j} + z(t)\hat{k}$ in 3 - space we define $\lim_{t\to\alpha} \vec{r}(t) =$ _____.

Select the correct option

R

- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j}$
- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + z(t)\hat{k}$
- $x(t)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + \left(\lim_{t\to\alpha} z(t)\right)\hat{k}$
- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + \left(\lim_{t\to\alpha} z(t)\right)\hat{k}$

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Question # 7 of 10 (Start time: 07:10:39 PM, 21 January 2021)

$$\int_0^{\frac{\pi}{2}} \int_0^1 r \; dr \; d\theta \; = \; - - - - - - - -$$

Select the correct option

- $\frac{\pi}{2}$
- $\frac{\pi}{3}$
- $\frac{\pi}{4}$
- $\frac{\pi}{6}$

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Quiz Start Time: 07

Question # 8 of 10 (Start time: 07:10:58 PM, 21 January 2021)

For a function $\vec{r}(t) = x(t)\hat{i} + y(t)\hat{j}$ in 2 - space we define $\lim_{t\to\alpha} \vec{r}(t) =$ _____.

Select the correct option

- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + y(t)\hat{j}$
- $x(t)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j}$
- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j}$
- $\left(\lim_{t\to\alpha} x(t)\right)\hat{i} + \left(\lim_{t\to\alpha} y(t)\right)\hat{j} + \left(\lim_{t\to\alpha} z(t)\right)\hat{k}$

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Question # 9 of 10 (Start time: 07:11:18 PM, 21 January 2021)

Natural domain of a vector valued function is

Select the correct option

- union of the natural domains of its components
- intersection of the natural domains of its components
- not dependent on domains of its components
- none of these

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MTH301:Quiz#2 Quiz Start Time: 07:08 PM, 21 Ja

Question # 10 of 10 (Start time: 07:11:38 PM, 21 January 2021) To

$If\ x'(t)\ and\ y'(t)\ are\ continuous,\ then\ the\ curve\ given\ by\ the\ parametric\ equation \backslash x = x(t), y = y(t)\ has\ arc\ length$

Select the correct option

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- $L = \int_a^b \sqrt{\left(\frac{dx}{dt}\right)^2 + \left(\frac{dy}{dt}\right)^2}\, dt$
- $L = \int_a^b \sqrt{\frac{dx}{dt} + \frac{dy}{dt}}\, dt$
- $L = \int_a^b \sqrt{(x)^2 + (y)^2}\, dxdy$
- None of these

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Quiz Start Time: 03:2(

Question # 1 of 10 (Start time: 03:20:12 PM, 21 January 2021)

If $x'(t), y'(t)$ and $z'(t)$ are continuous for $a \leqslant t \leqslant b$, then the arc lenght for the given parametric equations $x = x(t), y = y(t), z = z(t)$; $(a \leqslant t \leqslant b)$ is

Select the correct option

Rel

- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2 + (dz/dt)^2}\, dy$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2 + (dz/dt)^2}\, dt$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2 + (dz/dt)^2}\, dx$
- $L = \int_a^b \sqrt{(dx/dt)^2 - (dy/dt)^2 - (dz/dt)^2}\, dt$

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MTH301:Quiz#2 Quiz Start Time: 0

Question # 2 of 10 (Start time: 03:20:47 PM, 21 January 2021)

If $x'(t)$ and $y'(t)$ are continuous for $a \leqslant t \leqslant b$, then thearclenghtforthe given parametricequations$x = x(t), y = y(t)$; $(a \leqslant t \leqslant b)$ is

Select the correct option

- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dy$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dt$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dx$
- $L = \int_a^b \sqrt{(dx/dt)^2 - (dy/dt)^2}\, dt$

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MTH301:Quiz#2 Quiz Start Time: 0

Question # 2 of 10 (Start time: 03:20:47 PM, 21 January 2021)

If $x'(t)$ and $y'(t)$ are continuous for $a \leqslant t \leqslant b$, then thearclenghtforthe given parametricequations$x = x(t), y = y(t)$; $(a \leqslant t \leqslant b)$ is

Select the correct option

- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dy$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dt$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dx$
- $L = \int_a^b \sqrt{(dx/dt)^2 - (dy/dt)^2}\, dt$

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MTH301:Quiz#2 Quiz Start Tim

Question # 3 of 10 (Start time: 03:21:14 PM, 21 January 2021)

If $\vec{r}(t) = t^2\,\hat{i} + t\,\hat{j} + 3\,t\,\hat{k}$, then $\dfrac{d}{dt}\,[\vec{r}(t)] =$ _____.

Select the correct option

- $2\,t\,\hat{i} + t\,\hat{j} + 3\,\hat{k}$
- (●) $2\,t\,\hat{i} + \hat{j} + 3\,\hat{k}$
- $\hat{i} + \hat{j} + \hat{k}$
- $\hat{i} + t\,\hat{j} + 3\,\hat{k}$

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MTH301:Quiz#2 Quiz Start Time: 0

Question # 4 of 10 (Start time: 03:21:34 PM, 21 January 2021)

For a vector valued function $\vec{r}(t) = \sqrt{2}t\, i + (t+1)\, j - k$ then lenght of $\vec{r}(t)$

Select the correct option

- $\|r(t)\| = \sqrt{t^2 + (t+1)^2 + 1}$
- $\|r(t)\| = \sqrt{4t^2 + (t+1)^2 - 1}$
- $\|r(t)\| = \sqrt{4t^2 - (t+1)^2 - 1}$
- $\|r(t)\| = \sqrt{2t^2 + (t+1)^2 + 1}$

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MTH301:Quiz#2

Quiz Start Time: 03:20 P

Question # 5 of 10 (Start time: 03:21:59 PM, 21 January 2021)

Polar co - ordinates of a point are $\left(-4, \frac{-3\pi}{2}\right)$. Which of the following is another possible polar co - ordinates representation of this point?

Select the correct option

Reloa

- $\left(4, \frac{\pi}{4}\right)$
- $\left(4, \frac{-\pi}{2}\right)$
- $\left(4, \frac{-\pi}{3}\right)$
- $\left(4, \frac{3\pi}{4}\right)$

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MTH301:Quiz#2 Quiz S

Question # 6 of 10 (Start time: 03:22:21 PM, 21 January 2021)

In the integration of polar coordinates$dxdy$is replaced by

Select the correct option

- $drd\theta$
- $d\theta$
- rdr
- $rdrd\theta$

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MTH301:Quiz#2

Question # 7 of 10 (Start time: 03:22:43 PM, 21 January 2021)

$$\int_0^{\pi}\int_0^{1} r^2 \, dr \, d\theta = \text{---------}$$

Select the correct option

- $\frac{\pi}{2}$
- $\frac{\pi}{3}$
- $\frac{\pi}{4}$
- $\frac{\pi}{5}$

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MTH301:Quiz#2 Quiz Start Time

Question # 8 of 10 (Start time: 03:23:06 PM, 21 January 2021)

For a vector valued function $\vec{r}(t) = 3\,i + 4j - 0k$ then lenght of $\vec{r}(t)$

Select the correct option

- $\|r\| = 5$
- $\|r\| = 25$
- $\|r\| = 9$
- $\|r\| = 4$

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MTH301 - Calculus II

MTH301:Quiz#2 Quiz Start Time: 03:2

Question # 9 of 10 (Start time: 03:23:29 PM, 21 January 2021)

The arc length of the curve $r(t) = t^2 i - tj\ ;\ 0 \leqslant t \leqslant 1$, can be written as

Select the correct option

Re

- $L = \int_0^1 \sqrt{4t^2 - 1}dt$
- $L = \int_0^1 \sqrt{2t^2 - 1}dt$
- $L = \int_0^1 \sqrt{4t^2 + 1}dt$
- $L = \int_0^1 \sqrt{2t^2 + 1}dt$

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MTH301:Quiz#2

Quiz Start Time: 03:20 PM, 21

Question # 10 of 10 (Start time: 03:23:51 PM, 21 January 2021)

The arc length of the portation of the circular helix where $(dx/dt) = -\sin t, (dy/dt) = \cos t$ and$(dz/dt) = 1$and $0 \leqslant t \leqslant \pi$, then the arc lenght is

Select the correct option

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- $L = \int_0^{\pi} \sqrt{2} dy$
- $L = \int_0^{\pi} \sqrt{2} dt$
- $L = \int_0^{\pi} \sqrt{2} dx$
- $L = \int_0^{\pi} -\sqrt{2} dt$

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MTH301:Quiz#2 Quiz Start Time:

Question # 1 of 10 (Start time: 03:31:10 PM, 21 January 2021)

For a vector valued function $\vec{r}(t) = \sqrt{2t}\ i + (t+1)\ j$ then lenght of $\vec{r}(t)$

Select the correct option

- $\|r(t)\| = \sqrt{2t^2 + (t-1)^2}$
- $\|r(t)\| = \sqrt{4t^2 + (t-1)^2}$
- $\|r(t)\| = \sqrt{2t + (t-1)^2}$
- $\|r(t)\| = \sqrt{4t + (t-1)^2}$

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Quiz Start Time: 03:31 PM

Question # 2 of 10 (Start time: 03:31:36 PM, 21 January 2021)

In 3D - space the parametric equations $x = x(t), y = y(t), z = z(t)$ can be expressed in single vector equation as

Select the correct option

Reload

- $\vec{r}(t) = x(t) + y(t) + z(t)$
- $\vec{r}(t) = x(t)i + y(t)j + z(t)k$
- $\vec{r}(t) = x(t)j + y(t)i + z(t)k$
- $\vec{r}(t) = x(t) - y(t) - z(t)$

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Quiz Start Time: 03:31 PM

Question # 3 of 10 (Start time: 03:32:00 PM, 21 January 2021)

The arc length of the curve $r(t) = t^2 i - tj\,;\ 0 \leqslant t \leqslant 1$, can be written as

Select the correct option

Reload

○	$L = \int_0^1 \sqrt{4t^2 - 1}dt$
○	$L = \int_0^1 \sqrt{2t^2 - 1}dt$
●	$L = \int_0^1 \sqrt{4t^2 + 1}dt$
○	$L = \int_0^1 \sqrt{2t^2 + 1}dt$

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Question # 4 of 10 (Start time: 03:32:23 PM, 21 January 2021)

The equation $r = a(1 + \cos\ \theta)$ represents - - - - - - - - - .

Select the correct option

○	a straight line
●	cardioid
○	lemniscate
○	rose curve

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Question # 5 of 10 (Start time: 03:32:43 PM, 21 January 2021)

A single curve can be represented by

Select the correct option

- ○ Only one vector-valued function
- ○ Only two vector-valued function
- ◉ Infinitely many vector-valued function
- ○ None of these

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Question # 6 of 10 (Start time: 03:33:05 PM, 21 January 2021)

In the integration of polar coordinates$dxdy$is replaced by

Select the correct option

○	$drd\theta$
○	$d\theta$
○	rdr
◉	$rdrd\theta$

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Question # 7 of 10 (Start time: 03:33:26 PM, 21 January 2021)

The point $p(r, \theta)$ in polar coordinate system lies on

Select the correct option

○	Polar axis
○	y - axis
●	Pole
○	None of these

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MTH301:Quiz#2 Quiz Start Time: 0

Question # 8 of 10 (Start time: 03:33:47 PM, 21 January 2021)

In polar coordinate system, the equation $r = a$ represents a circle with center at - - - - - - - .

Select the correct option

- Origin
- $x-$ axis and passes through the origin.
- $y-$ axis and passes through the origin.
- None of these.

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Question # 9 of 10 (Start time: 03:34:11 PM, 21 January 2021)

A smooth function is a function that has continuous derivatives up to some desired order over some domain

Select the correct option

- (●) Yes
- ( ) No

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MTH301:Quiz#2

Question # 10 of 10 (Start time: 03:34:39 PM, 21 January 2021)

Vector valued function has

Select the correct option

- domain and range consists of real numbers
- domain consists of real numbers and range consists of vectos
- domain consists of vectors and range consists of real numbers
- none of these

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MTH301:Quiz#2 Quiz Start Time

Question # 1 of 10 (Start time: 01:20:42 AM, 21 January 2021)

Polar co - ordinates of a point are $\left(-3, \frac{-3\pi}{4}\right)$. Which of the following is another possible polar co - ordinates representation of this point?

Select the correct option

- $\left(-3, \frac{\pi}{2}\right)$
- $\left(-3, \frac{\pi}{4}\right)$
- $\left(-3, \frac{3\pi}{4}\right)$
- $\left(-3, \frac{\pi}{3}\right)$

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Quiz Start Time: 01:20 AM,

Question # 2 of 10 (Start time: 01:21:10 AM, 21 January 2021)

If $x'(t)$ and $y'(t)$ are continuous for $a \leqslant t \leqslant b$, then thearclenghtforthe given parametricequations$x = x(t), y = y(t)$; $(a \leqslant t \leqslant b)$ is

Select the correct option

Reload

- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dy$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dt$
- $L = \int_a^b \sqrt{(dx/dt)^2 + (dy/dt)^2}\, dx$
- $L = \int_a^b \sqrt{(dx/dt)^2 - (dy/dt)^2}\, dt$

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Question # 3 of 10 (Start time: 01:21:36 AM, 21 January 2021)

The point $p(r, \theta)$ in polar coordinate system lies on

Select the correct option

- Polar axis
- y - axis
- Pole
- None of these

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MTH301:Quiz#2 Quiz Start Time: 01:2

Question # 4 of 10 (Start time: 01:22:00 AM, 21 January 2021)

If $\vec{r}(t) = t^2\,\hat{i} + t\,\hat{j} + 3\,t\,\hat{k}$, then $\dfrac{d}{dt}\,[\vec{r}(t)] =$ _____.

Select the correct option

Re

- $2\,t\,\hat{i} + t\,\hat{j} + 3\,\hat{k}$
- $2\,t\,\hat{i} + \hat{j} + 3\,\hat{k}$
- $\hat{i} + \hat{j} + \hat{k}$
- $\hat{i} + t\,\hat{j} + 3\,\hat{k}$

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MTH301:Quiz#2 Quiz

Question # 5 of 10 (Start time: 01:22:24 AM, 21 January 2021)

$$\int_0^{\frac{\pi}{2}} \int_0^1 r \, dr \, d\theta = \text{--------}$$

Select the correct option

○	$\frac{\pi}{2}$
○	$\frac{\pi}{3}$
●	$\frac{\pi}{4}$
○	$\frac{\pi}{6}$

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Question # 6 of 10 (Start time: 01:22:45 AM, 21 January 2021)

The position of the limacon relative to the polar axis depends on whether _____ appears in the equation and whether + or − occurs.

Select the correct option

- $(a)\ \sin\theta$
- $(b)\ \cos\theta$
- $(c)\ \tan\theta$
- (d) Both (a) or (b).

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Quiz Start Time: 01:20 AM,

Question # 7 of 10 (Start time: 01:23:08 AM, 21 January 2021)

The relation between the polar coordinates $(r,\ \theta)$ and the rectangular coordinates $(x,\ y)$ is given by - - - - - - - .

Select the correct option

Reload M

○	$x = r \sin \theta, \quad y = r \cos \theta$
○	$x = r \sec \theta, \quad y = r \operatorname{cosec} \theta$
○	$x = r \cos \theta, \quad y = r \sec \theta$
◑	$x = r \cos \theta, \quad y = r \sin \theta$

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Question # 8 of 10 (Start time: 01:23:32 AM, 21 January 2021)

Let $\bar{r}(t) = 2t\,\hat{i} + 3t\,\hat{j}$, then $\bar{r}'(t) = 2\,\hat{i} + 3\,\hat{j}$.

Select the correct option

- *True*
- *False*

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MTH301:Quiz#2 Quiz Start Time: 01:2

Question # 9 of 10 (Start time: 01:23:55 AM, 21 January 2021)

A vector valued function in 2 - D can be expressed as

Select the correct option

Rel

- $\vec{r}(t) = x(t) + y(t)$
- $\vec{r}(t) = x(t)i + y(t)j$
- $\vec{r}(t) = x(t)j + y(t)i$
- $\vec{r}(t) = x(t) - y(t)$

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Question # 10 of 10 (Start time: 01:24:17 AM, 21 January 2021)

If $\vec{r}(t) = 3t^2\,\hat{i} + 2t\,\hat{j}$, then $\int \vec{r}(t)\,dt =$ _____.

Select the correct option

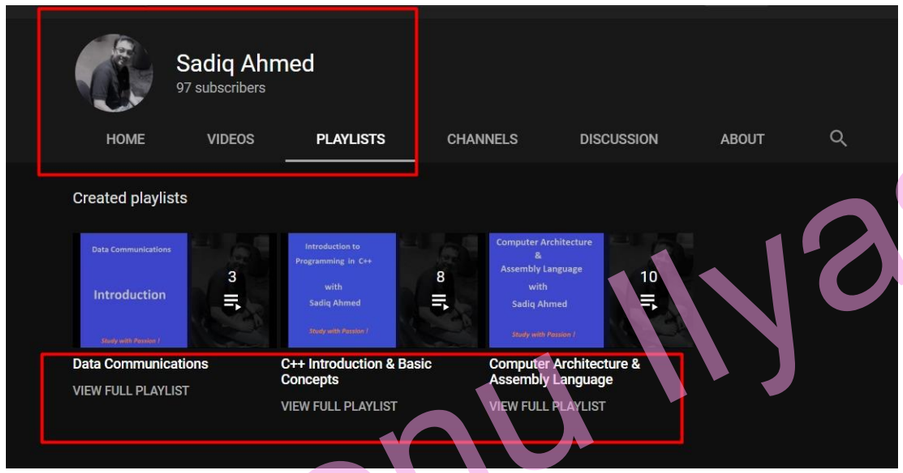
○	$6t\,\hat{i} + 2\,\hat{j}$
○	$t^3 + t^2 + C_1$
○	$t^3\hat{i} + t^2\,\hat{j} + C_2\hat{j}$
◉	$t^3\hat{i} + t^2\,\hat{j} + C_1\hat{i} + C_2\hat{j}$

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sonuilyasmughal@gmail.com

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5) Short QA Solved
6) MCQs Solved
7) Solved Past and Current paper
8) Solved Graded Activities
(Assignment Quiz GDB)

Activity
Detailed
Information

Project Enrolment Complete training with
Live classes on Zoom
1) SRS (Software Requirements Specification)
2) DD (Design Document)
3) Test phase
a) Test phase viva (Live Classes for viva preparation)
4) Final Deliverable
a) Final coding
b) Final presentation
c) Final report
d) Pre final viva (Coding Viva)
e) Final viva (Overall Presentation)

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