RIZ MUGHAL

QUIZ MASTER

MTH301 QUIZ 2(LEC 23 to 29)

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

FACEBOOK GROUP:

https://www.facebook.com/groups/923887914750307

MTH301:Quiz#2

Question # 1 of 10 (Start time: 02:55:15 PM, 21 January 2021)

The rose curve has n-equally spaced petals or loops if n is _____.

Select the correct option

- (●) odd
- ( ) even

MTH301:Quiz#2 Quiz Start Ti

Question # 2 of 10 (Start time: 02:55:29 PM, 21 January 2021)

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

Select the correct option

- (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).

MTH301:Quiz#2

Question # 3 of 10 (Start time: 02:55:50 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

MTH301:Quiz#2

Question # 4 of 10 (Start time: 02:56:03 PM, 21 January 2021)

If $\vec{r}(t) = t\,\hat{i} + 2t\,\hat{j}$, then $\frac{d}{dt}[\vec{r}(t)] =$ ____

Select the correct option

○	$t\,\hat{i} + 2\hat{j}$
○	$\hat{i} + 2t\,\hat{j}$
◉	$\hat{i} + 2\hat{j}$
○	$\hat{i} + \hat{j}$

MTH301:Quiz#2

Question # 5 of 10 (Start time: 02:56:18 PM, 21 January 2021)

$$\int_0^1 \int_0^1 \int_0^1 x^2 y^2 z^2 \, dx \, dy \, dz = \text{---------}$$

Select the correct option

○	$\frac{1}{3}$
○	$\frac{1}{9}$
◉	$\frac{1}{27}$
○	$\frac{1}{30}$

MTH301:Quiz#2 Quiz Start Time: 02:55

Question # 6 of 10 (Start time: 02:56:29 PM, 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

Relo

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

MTH301:Quiz#2

Question # 7 of 10 (Start time: 02:56:45 PM, 21 January 2021)

Graph of a vector-valued function can fail to have a tangent vector at a point because

Select the correct option

- a) derivative does not exists at that point
- b) derivative is zero at that point
- c) Both a) and b)
- d) Neither a) nor b)

MTH301:Quiz#2 Quiz Start Time: 02:55 PM, 21 Jan

Question # 8 of 10 (Start time: 02:56:57 PM, 21 January 2021) Tota

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

Select the correct option

Reload Math Ec

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

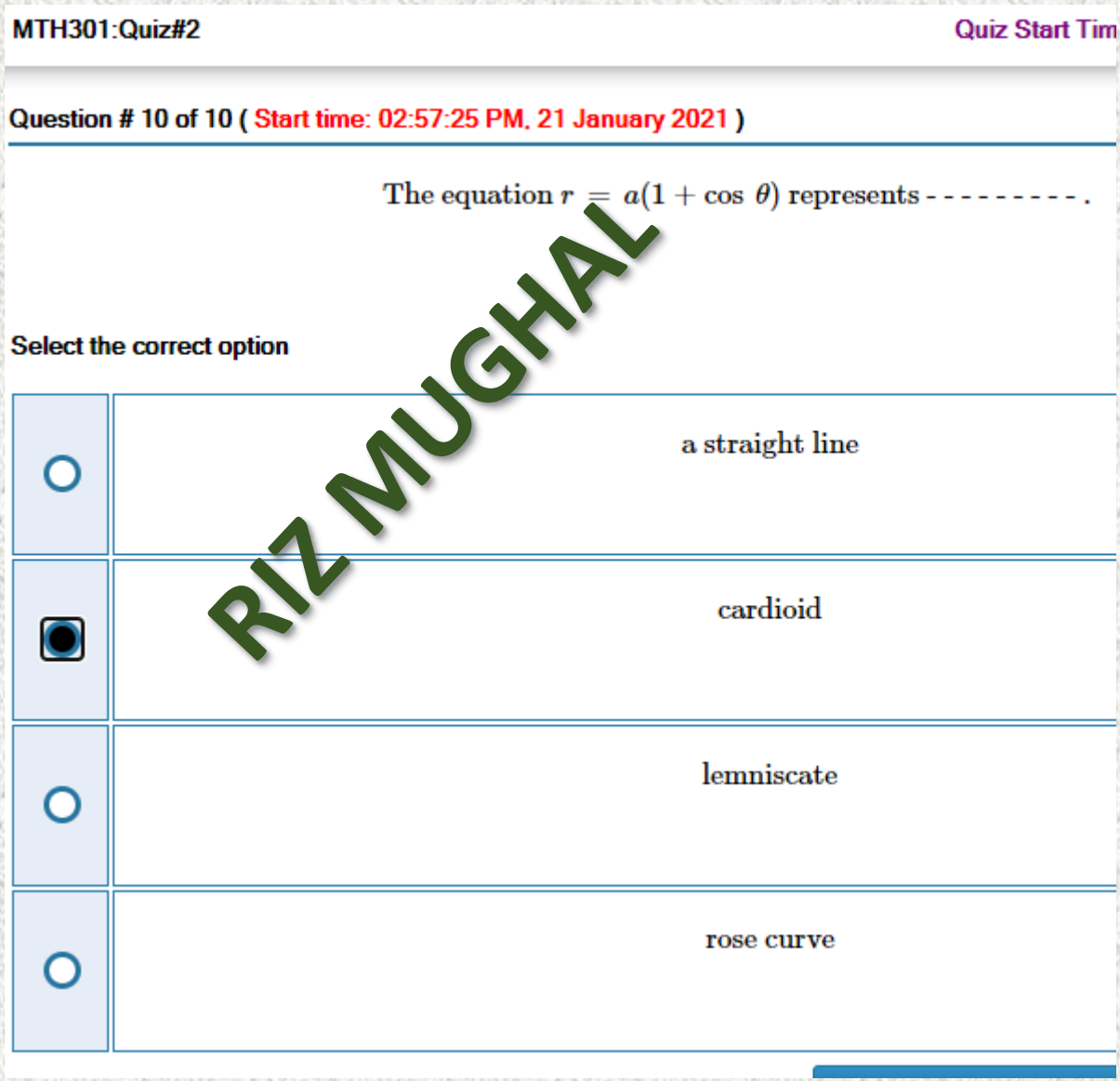
MTH301:Quiz#2 Quiz Start Time: 02

Question # 9 of 10 (Start time: 02:57:13 PM, 21 January 2021)

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

Select the correct option

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


MTH301:Quiz#2
Quiz Start Tim
Question # 10 of 10 (Start time: 02:57:25 PM, 21 January 2021)
The equation $r = a(1 + \cos\ \theta)$ represents - - - - - - - - - .
Select the correct option
a straight line
cardioid
lemniscate
rose curve
RIZ MUGHAL

2nd account

MTH301:Quiz#2 Quiz Start Time: 04:29 PM, 21 January 202

Question # 1 of 10 (Start time: 04:29:09 PM, 21 January 2021) Total Marks:

Polar co - ordinates of a point are $\left(-1, \frac{-3\pi}{4}\right)$. Which of the following is another possible polar co - ordinates representation of this point?

Select the correct option

Reload Math Equations

- [x] $\left(-1, \frac{\pi}{2}\right)$
- [ ] $\left(-1, \frac{\pi}{4}\right)$
- [ ] $\left(-1, \frac{3\pi}{4}\right)$
- [ ] $\left(-1, \frac{\pi}{3}\right)$

MTH301:Quiz#2

Question # 2 of 10 (Start time: 04:29:25 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

MTH301:Quiz#2

Question # 3 of 10 (Start time: 04:29:36 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

MTH301:Quiz#2 Quiz Start Time:

Question # 4 of 10 (Start time: 04:29:48 PM, 21 January 2021)

If $p(r, \theta)$ is a point in polar coordinate system, then θ is called

Select the correct option

○	Acute angle of p
◉	Polar angle of p
○	Reflex angle of p
○	Reflex angle of p

MTH301:Quiz#2 Quiz Start Time: 04:29 P

Question # 5 of 10 (Start time: 04:30:04 PM, 21 January 2021)

The point (3, 189^0) and the point - - - - - - - - - - - - - - are the same in polar syst

Select the correct option

Reloa

●	(-3, 9^0)
○	(3, 99^0)
○	(-3, 189^0)
○	(-3, 279^0)

MTH301:Quiz#2 Quiz Start Time: 04:29 PM, 21 Januar

Question # 6 of 10 (Start time: 04:30:18 PM, 21 January 2021) Total M

If $\vec{r}(t) = x(t)\hat{i} + y(t)\hat{j} + z(t)\hat{k}$ is a vector - valued function in 3 - space, and if $x(t)$, $y(t)$ and $z(t)$ are differentiable, then $\frac{d}{dt}[\vec{r}(t)] =$ _____.

Select the correct option

Reload Math Equa

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

MTH301:Quiz#2 Quiz St

Question # 7 of 10 (Start time: 04:30:33 PM, 21 January 2021)

Which integral gives the arc length of the curve

$$r(t) = \frac{1}{3}t^3 i + tj + t^2 k$$

Select the correct option

- $\int_1^3 \sqrt{1+t}dt$
- $\int_1^3 \sqrt{(\frac{1}{3}+t)^2}dt$
- $\int_1^3 \sqrt{(1+t)^2}dt$
- $\int_1^3 \sqrt{(1+t^2)^2}dt$

MTH301:Quiz#2

Question # 8 of 10 (Start time: 04:30:46 PM, 21 January

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

Select the correct option

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

MTH301:Quiz#2 Quiz Start Time

Question # 9 of 10 (Start time: 04:30:55 PM, 21 January 2021)

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

Select the correct option

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

MTH301:Quiz#2

Question # 10 of 10 (Start time: 04:31:12 PM, 21 January 2021)

Graph of a vector-valued function can fail to have a tangent vector at a point because

Select the correct option

- a) derivative does not ex[illegible]t point
- b) derivati[illegible]ro at that point
- c) Both a) and b)
- d) Neither a) nor b)