

MTH301 QUIZ(3)

Lecture 30 to 36

RIZ MUGHAL
SQA ENGINEER:

I'm providing 100% correct quiz solution.

You can visit my YouTube channel for more quiz solution, also final year project including project assignments, and viva.

YOUTUBE:

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

FACEBOOK:

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

MTH301:Quiz#3 Quiz Start Time: 10:58 AM, 07 February

Question # 1 of 10 (Start time: 10:58:05 AM, 07 February 2021) Total Mar

For a line integral, if the path of integration is parallel to x - axis i.e.$x = k, dx = 0$ then

RIZ MUGHAL

Select the correct option

Reload Math Equati

- $I_c = \int_c pdx$
- $I_c = -\int_c pdx$
- $I_c = \int_c Qdy$
- $I_c = \int_c Qdx$

MTH301:Quiz#3 Quiz Start Time: 10:58 AM, 07 Feb

Question # 2 of 10 (Start time: 10:58:27 AM, 07 February 2021) Tot

If $I = \int_{AB} Pdx + Qdy$ and $(Pdx + Qdy)$ is an exact differentialthen

Select the correct option

Reload Math E

RIZ MUGHAL

- $I_{c_1} - I_{c_2} = 0$
- $I_{c_1} + I_{c_2} = 0$
- $I_{c_1} \times I_{c_2} = 0$
- $I_{c_2} + I_{c_2} = 0$

MTH301:Quiz#3 Quiz Start Time: 10:58 AM, 07 Febru

Question # 3 of 10 (Start time: 10:58:44 AM, 07 February 2021) Total

Wallis sine formula when n is even

$$\int_0^{\frac{\pi}{2}} Sin^n x dx =$$

Select the correct option

Reload Math Eq

RIZ MUGHAL

- $\frac{n}{2} \cdot \frac{n-2}{2} \cdot \frac{n-4}{2} \cdot \frac{n-6}{2} \cdots \frac{6}{7} \cdot \frac{4}{5} \cdot \frac{2}{3}$
- $\frac{n-1}{2} \cdot \frac{n-1}{2} \cdot \frac{n-1}{2} \cdot \frac{n-1}{2} \cdots \frac{5}{6} \cdot \frac{3}{4} \cdot \frac{1}{2} \cdot \frac{\pi}{2}$
- $\frac{n-1}{n} \cdot \frac{n-3}{n-2} \cdot \frac{n-5}{n-4} \cdot \frac{n-7}{n-6} \cdots \frac{5}{6} \cdot \frac{3}{4} \cdot \frac{1}{2} \cdot \frac{\pi}{2}$
- $\frac{n-1}{n} \cdot \frac{n-3}{n-2} \cdot \frac{n-5}{n-4} \cdot \frac{n-7}{n-6} \cdots \frac{6}{7} \cdot \frac{4}{5} \cdot \frac{2}{3}$

MTH301:Quiz#3 Quiz Start Time: 10:58 AM.

Question # 4 of 10 (Start time: 10:59:02 AM, 07 February 2021)

$$\int_0^{\frac{\pi}{2}} Cos^2 x dx = \frac{1}{2}\left|\frac{\pi}{2} + \frac{\sin \pi}{2}\right| =$$

Select the correct option

Reload

○	$\frac{\pi}{2}$
◉	$\frac{\pi}{4}$
○	$\frac{\pi}{3}$
○	$\frac{3\pi}{4}$

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 10:58 AM, 07 Febru

Question # 5 of 10 (Start time: 10:59:18 AM, 07 February 2021) Total

The grad operator ∇ acts on a(an) _____ and gives a vector.

Select the correct option

Reload Math Equ

- vector
- constant
- scalar
- unit vector

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 10:

Question # 6 of 10 (Start time: 10:59:36 AM, 07 February 2021)

If a vector field exists for all points of the curve C, then for each element of arc we can form the _____.

RIZ MUGHAL

Select the correct option

- ○ vector field
- ○ scalar filed
- ○ vector product
- ◉ scalar product

MTH301:Quiz#3 Quiz Start T

Question # 7 of 10 (Start time: 10:59:52 AM, 07 February 2021)

Sign of line integral is reversed when the direction of integration along the path is reversed.

Select the correct option

- (●) True
- ( ) False

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 10:58 A

Question # 8 of 10 (Start time: 11:00:07 AM, 07 February 2021)

One of the line integral properties is $\int_{AB} Pdx + Qdy = -\int_{BA} Pdx + Qdy$

Select the correct option

Reloa

- True
- False

RIZ MUGHAL

MTH301:Quiz#3 Quiz

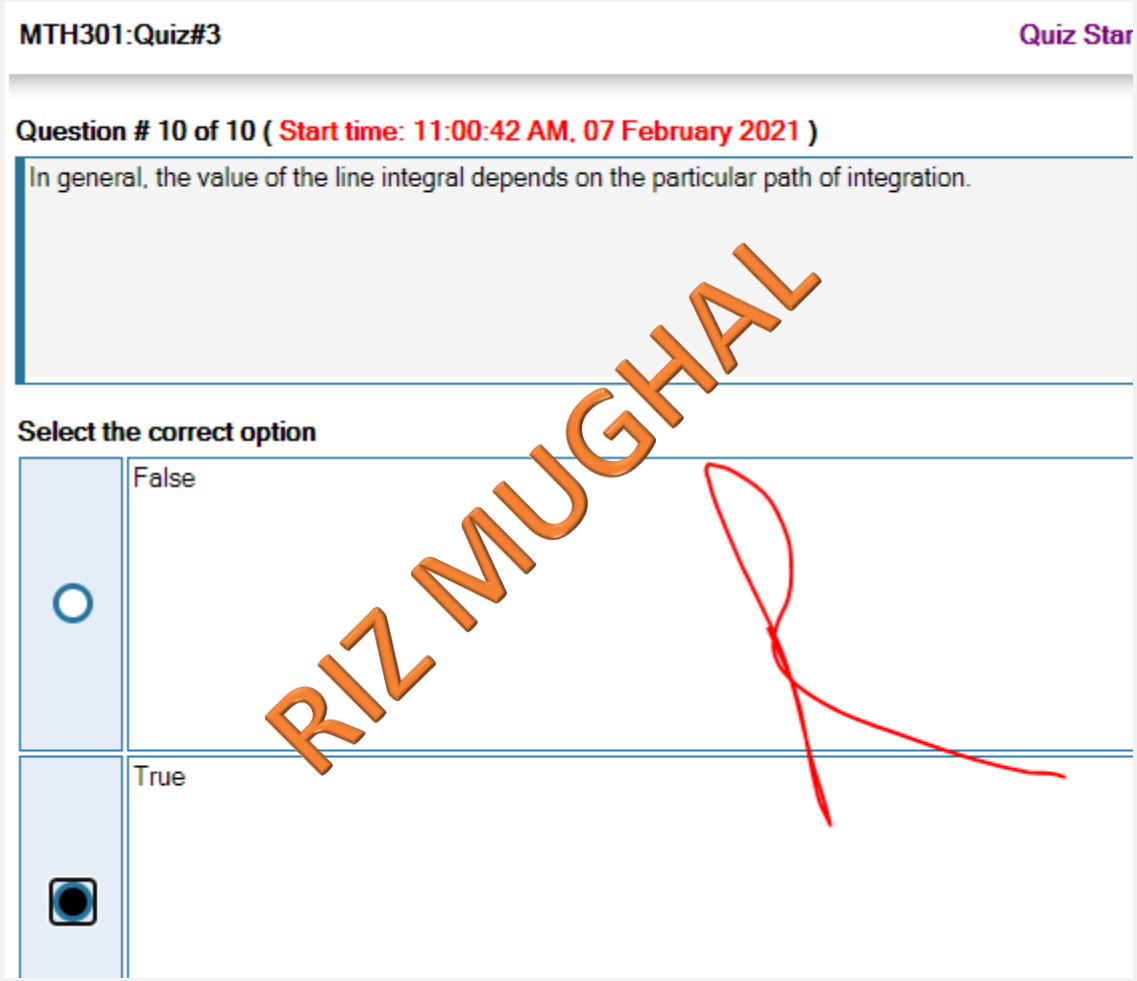
Question # 9 of 10 (Start time: 11:00:23 AM, 07 February 2021)

The value of the integral is --------- independent of the path of integration taken.

Select the correct option

- always
- may or may not

RIZ MUGHAL


MTH301:Quiz#3
Quiz Star
Question # 10 of 10 (Start time: 11:00:42 AM, 07 February 2021)
In general, the value of the line integral depends on the particular path of integration.
Select the correct option
False
True
RIZ MUGHAL

2nd account

MTH301:Quiz#3 Quiz St

Question # 1 of 10 (Start time: 11:09:00 AM, 07 February 2021)

The value of the integral $I = \int(x^2 + x + 2)dx$ is

Select the correct option

- ○ 12
- ○ 14
- ● 10
- ○ 28

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:09 AM, 07 February 202

Question # 2 of 10 (Start time: 11:09:23 AM, 07 February 2021) Total Marks:

If $Pdx + Qdy + Rdw$ is an exact differential equation then $\oint_C (Pdx + Qdy + Rdw)$ is _____.

Select the correct option

Reload Math Equations

- -1
- zero
- finite
- infinite

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:09 AM, 07 Feb

Question # 3 of 10 (Start time: 11:09:41 AM, 07 February 2021) Tot

To evaluate the line integral, $\int_C V(r)\,dr$, the integrand is expressed in terms of $x,\ y,\ z$ with $d\vec{r} =$ ____

Select the correct option

Reload Math E

- $dx\,\hat{i}$
- $dx\,\hat{i} + dy\,\hat{j}$
- $dx\,\hat{i} + dy\,\hat{j} + dz\,\hat{k}$
- $\sqrt{dx\,\hat{i} + dy\,\hat{j} + dz\,\hat{k}}$

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:09 AM, 07 Febr

Question # 4 of 10 (Start time: 11:09:59 AM, 07 February 2021) Tota

$$\int_0^{\frac{\pi}{2}} Cos^2 x dx = \frac{1}{2}\left|\frac{\pi}{2} + \frac{\sin \pi}{2}\right| =$$

Select the correct option

Reload Math Eq

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

RIZ MUGHAL

MTH301:Quiz#3

Quiz Start Time: 11:09 AM, 07 Februar

Question # 5 of 10 (Start time: 11:10:14 AM, 07 February 2021)

Total M

If $P = 3x^2 + 2y^2$ and $Q = 4xy$ then _____.

RIZ MUGHAL

Select the correct option

Reload Math Equa

- $\frac{\partial Q}{\partial x} = 4xy$
- $\frac{\partial P}{\partial y} = 6x + 4y$
- $\frac{\partial P}{\partial y} = \frac{\partial Q}{\partial x}$
- $\frac{\partial P}{\partial y} \neq \frac{\partial Q}{\partial x}$

MTH301:Quiz#3 Quiz Start Time: 11:09 AM, 07 Fe

Question # 6 of 10 (Start time: 11:10:28 AM, 07 February 2021) T

The div operator ∇ acts on a(an) _____ and gives a scalar.

Select the correct option

Reload Math

- scalar
- vector
- unit vector
- constant

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time:

Question # 7 of 10 (Start time: 11:10:43 AM, 07 February 2021)

The path of integration of a line integral must be ----------

Select the correct option

- straight and single-valued
- continuous and single-valued
- straight and multi-valued
- continuous and multi-valued

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:09 AM, 07 February

Question # 8 of 10 (Start time: 11:10:57 AM, 07 February 2021) Total M

Path of integration parallel to _____, $dx = 0$. $\therefore\ I_C = \int_C Q\, dy$.

Select the correct option

Reload Math Equat

- x - axis
- y - axis
- z - axis
- $dz = 0$

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:09 AM, 07 Februa

Question # 9 of 10 (Start time: 11:11:12 AM, 07 February 2021) Total M

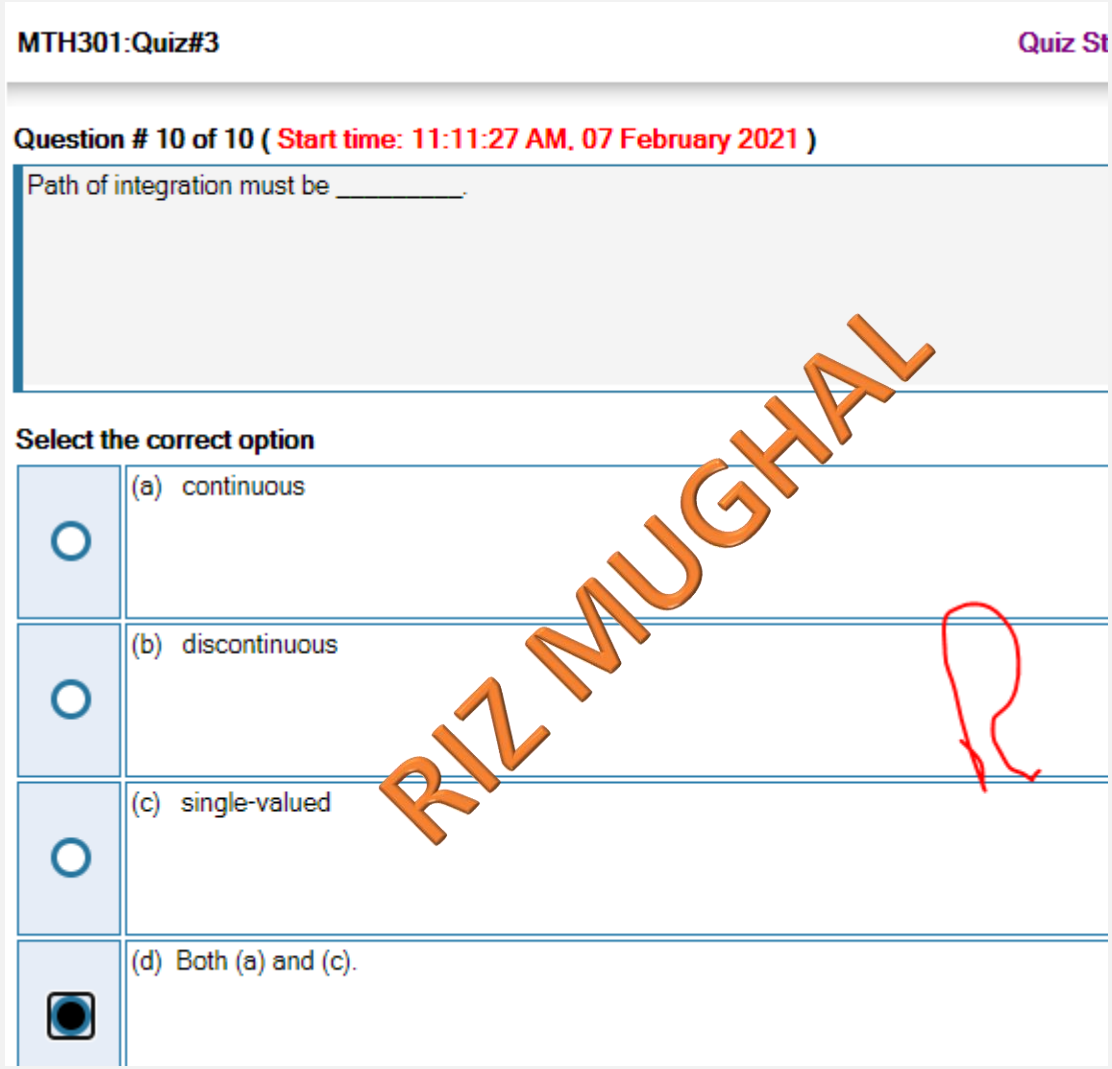
The grad operator ∇ acts on a(an) _____ and gives a vector.

RIZ MUGHAL

Select the correct option

Reload Math Equa

○	vector
○	constant
◉	scalar
○	unit vector


MTH301:Quiz#3
Quiz St
Question # 10 of 10 (Start time: 11:11:27 AM, 07 February 2021)
Path of integration must be _____.
Select the correct option
(a) continuous
(b) discontinuous
(c) single-valued
(d) Both (a) and (c).
RIZ MUGHAL

3rd account

MTH301:Quiz#3 Quiz Start Time: 11:14 AM,

Question # 1 of 10 (Start time: 11:14:03 AM, 07 February 2021)

Sign of line integral is reversed when the direction of integration along the path is reversed.

Select the correct option

- (●) True
- ( ) False

RIZ MUGHAL

MTH301:Quiz#3 Quiz

Question # 2 of 10 (Start time: 11:14:36 AM, 07 February 2021)

The path traversal in calculating the Green's Theorem is --------

RIZ MUGHAL

Select the correct option

- clockwise
- anticlockwise
- inwards
- outwards

MTH301:Quiz#3 Quiz Start Time: 11:14 AM, 07

Question # 3 of 10 (Start time: 11:15:12 AM, 07 February 2021)

If $P = 3x^2 + 2y^2$ and $Q = 4xy$ then _____.

RIZ MUGHAL

Select the correct option

Reload Ma

- $\frac{\partial Q}{\partial x} = 4xy$
- $\frac{\partial P}{\partial y} = 6x + 4y$
- $\frac{\partial P}{\partial y} = \frac{\partial Q}{\partial x}$
- $\frac{\partial P}{\partial y} \neq \frac{\partial Q}{\partial x}$

MTH301:Quiz#3

Quiz Start Time: 11:14 AM, 07 Februa

Question # 4 of 10 (Start time: 11:15:28 AM, 07 February 2021)

Total

If$(Pdx + Qdy)$ is an exact differentialthen

Select the correct option

Reload Math Equ

- $\oint (Pdx + Qdy) = 0$
- $\oint (Pdx + Qdy) \neq 0$
- $\oint (Pdx + Qdy) = -1$
- $\oint (Pdx + Qdy) = 1$

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:14 AM, 07 Fe

Question # 5 of 10 (Start time: 11:15:47 AM, 07 February 2021) To

To eveluate a line integral, the integrand is expressed in terms of x, y, z with

Select the correct option

Reload Math

- $dr = dxi + dyj + dzk$
- $dr = xi + yj + zk$
- $dr = dx + dy + dz$
- $dr = x + y + z$

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:14 AM, 07 February 2021

Question # 6 of 10 (Start time: 11:16:13 AM, 07 February 2021) Total Marks: 1

The line integral of $F(r)$, $\int_C \vec{F}.d\vec{r}$, is a scalar because $\vec{F}.d\vec{r}$ is a _____.

Select the correct option

Reload Math Equations

- (●) scalar product
- ( ) scalar field
- ( ) vector product
- ( ) vector field

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:14 AM, 07 Fel

Question # 7 of 10 (Start time: 11:16:29 AM, 07 February 2021) Tc

Wallis sine formula when n is even

$$\int_0^{\frac{\pi}{2}} Cos^4 x dx =$$

Select the correct option

Reload Math

- $\frac{4}{5} \cdot \frac{2}{3}$
- $\frac{3}{4} \cdot \frac{1}{2} \cdot \frac{\pi}{2}$
- $\frac{3}{4} \cdot \frac{1}{2}$
- $\frac{4}{3} \cdot \frac{2}{1} \cdot \frac{\pi}{2}$

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:14 AM, 07 February 20

Question # 8 of 10 (Start time: 11:16:44 AM, 07 February 2021) Total Mark

Wallis sine formula when n is odd

$$\int_0^{\frac{\pi}{2}} Sin^7 x dx =$$

Select the correct option

Reload Math Equation

RIZ MUGHAL

- $\frac{6}{7} \cdot \frac{4}{5} \cdot \frac{2}{3}$
- $\frac{7}{6} \cdot \frac{5}{4} \cdot \frac{3}{2} \cdot \frac{\pi}{2}$
- $\frac{7}{6} \cdot \frac{5}{4} \cdot \frac{3}{2}$
- $\frac{6}{7} \cdot \frac{4}{5} \cdot \frac{2}{3} \cdot \frac{\pi}{2}$

MTH301:Quiz#3

Quiz Start Time: 11:14 AM, 07 Febr

Question # 9 of 10 (Start time: 11:17:00 AM, 07 February 2021)

Tota

$$\int_0^{\frac{\pi}{2}} \sin^2 x dx = \frac{1}{2}\left|\frac{\pi}{2} - \frac{\sin \pi}{2}\right| =$$

Select the correct option

Reload Math Ec

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

RIZ MUGHAL

MTH301:Quiz#3 Quiz Start Time: 11:14 AM, 07 Febru

Question # 10 of 10 (Start time: 11:17:15 AM, 07 February 2021) Total

One of the line integral properties is $\int_{AB} Fds = -\int_{BA} Fds$

Select the correct option

Reload Math Equ

- (●) True
- ( ) False

RIZ MUGHAL



Thank you for watching ☺

Share with your fellows

rizwanqadeer848@gmail.com