Question # 4 of 10 (Start time: 05:48:19 PM, 26 August 2021)

For the steady incompressible two dimensional flow, the continuity equation is given as

Select the correct option

- $\partial u/\partial x + \partial v/\partial y = 0$
- $\partial \rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial \rho/\partial t + \partial u/\partial x + \partial v/\partial y = 0$ ✓
- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$

Type here to search

MC200203202: ABDUL RAUOF

MTH642:Quiz #3

Question # 9 of 10 (Start time: 04:21:48 PM, 26 August 2021)

The flow is appoximated as incompressible if _____.

Select the correct option

- $\nabla \cdot V = \infty$
- $\nabla \cdot V = -1$
- $\nabla \cdot V = 0$ ✓
- $\nabla \cdot V = 1$

Question # 10 of 10 (Start time: 04:22:31 PM, 26 August 2021)

The material derivative $D\rho/Dt$ can be expanded as _____.

Select the correct option

- $\frac{\partial V}{\partial t} + V \cdot \nabla \rho$
- $\frac{\partial \rho}{\partial t} + \nabla . V\rho$
- $\frac{\partial \rho}{\partial t} + V \cdot \nabla \rho$ ✓
- $\frac{\partial V}{\partial t} + \nabla . V\rho$

The differential equation representing the transport of linear momentum, and conservation of linear momentum as well is called____

Select the correct option

- the continuity equation
- the Navier-Stokes equation
- the Reynolds Transport equation
- the Euler equation

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Which of the follwing is used to define the stream function for two dimensional flows?

Select the correct option

- the Navier-Stokes equation
- the Cauchy equation
- the Reynolds Transport equation
- the continuity equation

Question # 4 of 10 (Start time: 04:44:50 PM, 26 August 2021)

For the steady compressible two dimensional flow, the continu

Select the correct option

○	$\partial(u)/\partial x + \partial(v)/\partial y = 0$
○	$\partial\rho/\partial t + \rho\partial(u)/\partial x + \rho\partial(v)/\partial y = 0$
●	$\partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$ ✓
○	$\partial\rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 1 of 10 (Start time: 05:27:00 PM, 26 August 2021) Total Marks: 1

For the steady compressible flow, the continuity equation is given as _____.

Select the correct option

Reload Math Equations

- $\partial\rho/\partial t + \nabla.(\rho V) = 0$
- $\partial\rho/\partial t + \nabla.V = 0$
- $\nabla.(\rho V) = 0$
- $\nabla.V = 0$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 4 of 10 (Start time: 05:31:02 PM, 26 August 2021) Total Marks: 1

The material derivative *Dρ/Dt* can be expanded as _____.

Select the correct option

Reload Math Equations

- $\frac{\partial V}{\partial t} + V \cdot \nabla \rho$
- $\frac{\partial V}{\partial t} + \nabla . V \rho$
- $\frac{\partial \rho}{\partial t} + V \cdot \nabla \rho$
- $\frac{\partial \rho}{\partial t} + \nabla . V \rho$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 87 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 5 of 10 (Start time: 05:32:11 PM, 26 August 2021)

Total Marks: 1

The flow is appoximated as incompressible if _____.

Select the correct option

Reload Math Equations

- $\nabla \cdot V = 1$
- $\nabla \cdot V = \infty$
- $\nabla \cdot V = 0$
- $\nabla \cdot V = -1$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 6 of 10 (Start time: 05:33:06 PM, 26 August 2021)

Total Marks: 1

For the unsteady compressible three dimensional flow, the continuity equation is given as _____.

Select the correct option

Reload Math Equations

- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y + \partial(\rho u)/\partial z = 0$
- $\partial u/\partial x + \partial v/\partial y + \partial w/\partial z = 0$
- $\partial \rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y + \partial(\rho w)/\partial z = 0$
- $\partial \rho/\partial t + \rho\partial(u)/\partial x + \rho\partial(\rho v)/\partial y + \rho\partial(u)/\partial z = 0$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 84 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 3 of 10 (Start time: 05:30:02 PM, 26 August 2021) Total Marks: 1

The continuity equation for steady incompressible flow in cylindrical coordinates is given as _____.

Select the correct option

Reload Math Equations

- $\frac{1}{r}\frac{\partial(r\rho u_r)}{\partial r} + \frac{1}{r}\frac{\partial(\rho u_\theta)}{\partial \theta} + \frac{\partial(\rho u_z)}{\partial z} = 0$
- $\frac{1}{r}\frac{\partial \rho}{\partial t} + \frac{1}{r}\frac{\partial(r\rho u_r)}{\partial r} + \frac{1}{r}\frac{\partial(\rho u_\theta)}{\partial \theta} + \frac{\partial(\rho u_z)}{\partial z} = 0$
- $\partial u/\partial x + \partial v/\partial y + \partial w/\partial z = 0$
- $\frac{1}{r}\frac{\partial(ru_r)}{\partial r} + \frac{1}{r}\frac{\partial(u_\theta)}{\partial \theta} + \frac{\partial(u_z)}{\partial z} = 0$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 87 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 2 of 10 (Start time: 05:28:28 PM, 26 August 2021)

Total Marks: 1

For an incompressible three dimensional flow, which of the following must be true?

Select the correct option

Reload Math Equations

- $\frac{\partial v}{\partial t} = 0$
- $\frac{\partial w}{\partial t} = 0$
- $\frac{\partial u}{\partial t} = 0$
- $\frac{\partial \rho}{\partial t} = 0$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 7 of 10 (Start time: 05:35:14 PM, 26 August 2021) Total Marks: 1

Which of the following is the compressible continuity equation?

Select the correct option

Reload Math Equations

- $\nabla \bullet V = 0$
- $\frac{\partial \rho}{\partial t} + \nabla \bullet (\rho V) = 0$
- $\frac{DV}{Dt} = \frac{\partial V}{\partial t} + (V \bullet \nabla)V$
- $\rho \frac{DV}{Dt} = -\nabla P + \rho g + \mu \nabla^2 V$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 8 of 10 (Start time: 05:36:48 PM, 26 August 2021)

Total Marks: 1

For the steady incompressible two dimensional flow, the continuity equation is given as _____.

Select the correct option

Reload Math Equations

- $\partial u/\partial x + \partial v/\partial y = 0$
- $\partial \rho/\partial t + \partial u/\partial x + \partial v/\partial y = 0$
- $\partial \rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 9 of 10 (Start time: 05:38:38 PM, 26 August 2021)

Total Marks: 1

The continuity equation for steady compressible flow in cylindrical coordinates is given as _____.

Select the correct option

Reload Math Equations

- $\frac{1}{r}\frac{\partial(r\rho u_r)}{\partial r} + \frac{1}{r}\frac{\partial(\rho u_\theta)}{\partial \theta} + \frac{\partial(\rho u_z)}{\partial z} = 0$
- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y + \partial(\rho u)/\partial z = 0$
- $\frac{1}{r}\frac{\partial \rho}{\partial t} + \frac{1}{r}\frac{\partial(r\rho u_r)}{\partial r} + \frac{1}{r}\frac{\partial(\rho u_\theta)}{\partial \theta} + \frac{\partial(\rho u_z)}{\partial z} = 0$
- $\frac{1}{r}\frac{\partial(r u_r)}{\partial r} + \frac{1}{r}\frac{\partial(u_\theta)}{\partial \theta} + \frac{\partial(u_z)}{\partial z} = 0$

Click to Save Answer & Move to Next Question

MC200203056: MUHAMMAD FAIZAN BUTT

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 05:27 PM, 26 August 2021

Question # 10 of 10 (Start time: 05:39:28 PM, 26 August 2021)

Total Marks: 1

Which of the follwing is used to define the stream function for two dimensional flows?

Select the correct option

Reload Math Equations

- the Cauchy equation
- the continuity equation ✓
- the Reynolds Transport equation
- the Navier-Stokes equation

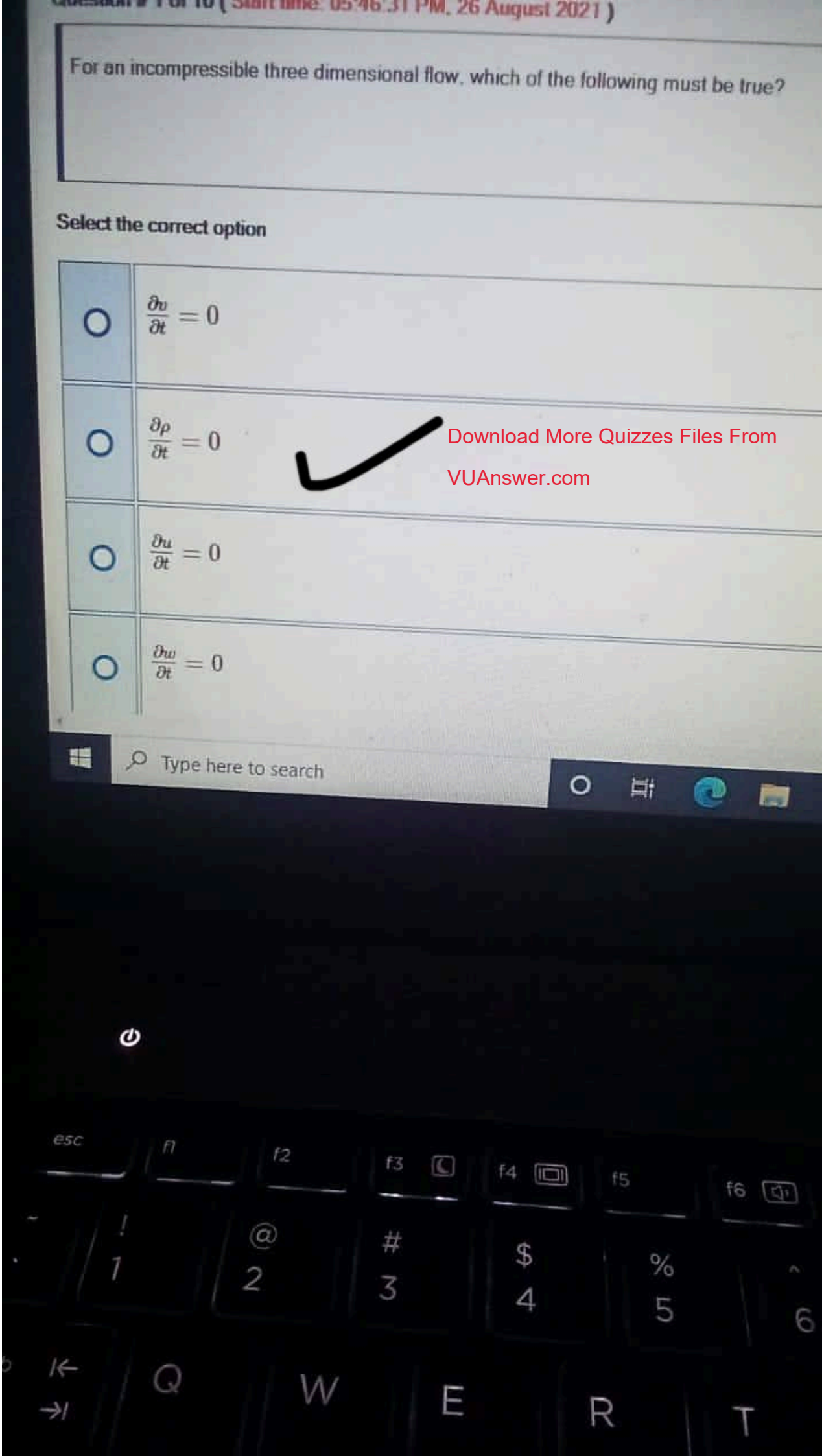
Click to Save Answer & Move to Next Question

Question # 1 of 10 (Start time: 05:46:31 PM, 26 August 2021)

For an incompressible three dimensional flow, which of the following must be true?

Select the correct option

- $\frac{\partial v}{\partial t} = 0$
- $\frac{\partial \rho}{\partial t} = 0$
- $\frac{\partial u}{\partial t} = 0$
- $\frac{\partial w}{\partial t} = 0$



Question # 3 of 10 (Start time: 05:47:52 PM, 26 August 2021)

For the steady incompressible flow, the continuity equation is given as _____.

Select the correct option

- $\nabla.(\rho V) = 0$
- $\nabla.V = 0$
- $\partial\rho/\partial t + \nabla.(\rho V) = 0$
- $\partial\rho/\partial t + \nabla.V = 0$

Type here to search

Question # 4 of 10 (Start time: 05:48:19 PM, 26 August 2021)

For the steady incompressible two dimensional flow, the continuity equation is given as

Select the correct option

- $\partial u/\partial x + \partial v/\partial y = 0$
- $\partial \rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial \rho/\partial t + \partial u/\partial x + \partial v/\partial y = 0$
- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$

Type here to search

Question # 9 of 10 (Start time: 02:44:52 PM, 26 August 2021)

For the steady compressible two dimensional flow, the continuity equation is given as _____

Select the correct option

- $\partial\rho/\partial t + \rho\partial(u)/\partial x + \rho\partial(v)/\partial y = 0$
- $\partial\rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial(u)/\partial x + \partial(v)/\partial y = 0$

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MC200201052. HAMZA IQBAL

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 10:50 AM, 25 August 2021

Question # 7 of 10 (Start time: 10:57:21 AM, 25 August 2021)

Total Marks: 1

The differential equation representing the transport of mass and conservation of mass as well is called____.

Select the correct option

Reload Math Equations

- the Reynolds Transport equation
- the continuity equation
- the Navier-Stokes equation
- the Cauchy equation

Click to Save Answer & Move to Next Question

MTH642:Quiz #3

Question # 3 of 10 (Start time: 10:53:47 AM, 25 August 2021)

Which of the following is the compressible continuity equation?

Select the correct option

○	$\nabla \bullet V = 0$
○	$\frac{\partial \rho}{\partial t} + \nabla \bullet (\rho V) = 0$
○	$\frac{DV}{Dt} = \frac{\partial V}{\partial t} + (V \bullet \nabla)V$
○	$\rho \frac{DV}{Dt} = -\nabla P + \rho g + \mu \nabla^2 V$

MC200201052. HAMZA IQBAL

MTH642:Quiz #3

Question # 6 of 10 (Start time: 10:56:24 AM, 25 August 2021)

The continuity equation for steady compressible flow in cylindrical coordinates is given as _____.

Select the correct option

- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y + \partial(\rho u)/\partial z = 0$
- $\frac{1}{r}\frac{\partial(r\rho u_r)}{\partial r} + \frac{1}{r}\frac{\partial(\rho u_\theta)}{\partial \theta} + \frac{\partial(\rho u_z)}{\partial z} = 0$
- $\frac{1}{r}\frac{\partial \rho}{\partial t} + \frac{1}{r}\frac{\partial(r\rho u_r)}{\partial r} + \frac{1}{r}\frac{\partial(\rho u_\theta)}{\partial \theta} + \frac{\partial(\rho u_z)}{\partial z} = 0$
- $\frac{1}{r}\frac{\partial(r u_r)}{\partial r} + \frac{1}{r}\frac{\partial(u_\theta)}{\partial \theta} + \frac{\partial(u_z)}{\partial z} = 0$

MC200201052. HAMZA IQBAL

MTH642:Quiz #3

Question # 4 of 10 (Start time: 10:54:56 AM, 25 August 2021)

For an incompressible three dimensional flow, which of the following must be true?

Select the correct option

- $\frac{\partial w}{\partial t} = 0$
- $\frac{\partial \rho}{\partial t} = 0$
- $\frac{\partial v}{\partial t} = 0$
- $\frac{\partial u}{\partial t} = 0$

MTH642:Quiz #3

Question # 1 of 10 (Start time: 10:50:37 AM, 25 August 2021)

For the steady compressible two dimensional flow, the continuity equation is given as _____.

Select the correct option

- $\partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial\rho/\partial t + \rho\partial(u)/\partial x + \rho\partial(v)/\partial y = 0$
- $\partial\rho/\partial t + \partial(\rho u)/\partial x + \partial(\rho v)/\partial y = 0$
- $\partial(u)/\partial x + \partial(v)/\partial y = 0$

MC200201032 HAMZA IQBAL

MTH642:Quiz #3

Question # 5 of 10 (Start time: 10:55:42 AM, 25 August 2021)

The flow is appoximated as incompressible if _____.

Select the correct option

- $\nabla \cdot V = \infty$
- $\nabla \cdot V = 1$
- $\nabla \cdot V = -1$
- $\nabla \cdot V = 0$ ✓

MC200201052 HAMZA IQBAL

MTH642:Quiz #3

Question # 8 of 10 (Start time: 10:58:44 AM, 25 August 2021)

Which of the following is the incompressible continuity equation?

Select the correct option

- $\rho\frac{DV}{Dt} = -\nabla P + \rho g + \mu\nabla^2 V$
- $\frac{\partial\rho}{\partial t} + \nabla \bullet (\rho V) = 0$
- $\frac{DV}{Dt} = \frac{\partial V}{\partial t} + (V \bullet \nabla)V$
- $\nabla \bullet V = 0$