MC200203827: TAHSEEN HASSAN

Time Left 90 sec(s)

MTH642:Quiz #3

Quiz Start Time: 01:24 PM, 26 August 2021

Question # 6 of 10 (Start time: 01:31:41 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

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

Click to Save Answer & Move to Next Question

Question # 2 of 10 (Start time: 02:27:57 PM, 26 August 2021)

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

Select the correct option

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

MC200203300: MARYAM BIBI

Time Left 89 sec(s)

MTH642:Quiz #3

Quiz Start Time: 01:13 PM, 26 August 2021

Question # 1 of 10 (Start time: 01:15:32 PM, 26 August 2021)

Total Marks: 1

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

Select the correct option

Reload Math Equations

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

Click to Save Answer & Move to Next Question

H642:Quiz #3

estion # 4 of 10 (Start time: 02:30:03 PM, 26 August 2021)

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

ect the correct option

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

Question # 2 of 10 (Start time: 02:38:58 PM, 26 August 2021)

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

Select the correct option

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

Question # 1 of 10 (Start time: 02:37:30 PM, 26 August 2021)

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

Select the correct option

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

Quiz

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MC200203302: BINA KANWAL

MTH642:Quiz #3

Question # 5 of 10 (Start time: 02:30:46 PM, 26 August 2021)

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

Select the correct option

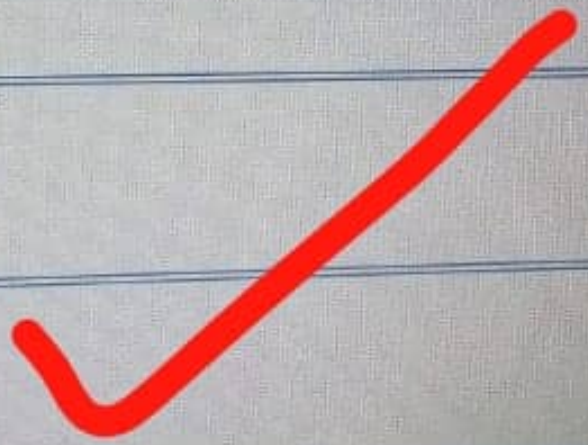
- the Navier-Stokes equation
- the Reynolds Transport equation
- the continuity equation
- the Cauchy equation

Question # 4 of 10 (Start time: 02:41:25 PM, 26 August 2021)

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

Select the correct option

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



Question # 5 of 10 (Start time: 02:42:15 PM, 26 August 2021)

The flow is appoximated as incompressible if _____.

Select the correct option

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

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

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

Question # 6 of 10 (Start time: 02:43:03 PM, 26 August 2021)

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

Select the correct option

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

MTH642 Quiz #3

Question # 7 of 10 (Start time: 02:43:34 PM, 26 August 2021)

Which of the following is the compressible continuity equation?

Select the correct option

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

MC200201114: MUBASHIR MEHMOOD

MTH642 Quiz #3

Question # 8 of 10 (Start time: 02:44:17 PM, 26 August 2021)

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

Select the correct option

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

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

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

Question # 10 of 10 (Start time: 02:46:18 PM, 26 August 2021)

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

Select the correct option

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

MC200203827: TAHSEEN HASSAN

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 01:24 PM, 26 August 2021

Question # 9 of 10 (Start time: 01:36:02 PM, 26 August 2021)

Total Marks: 1

Which of the following is the incompressible 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

MC200203300: MARYAM BIBI

Time Left 88 sec(s)

MTH642:Quiz #3

Quiz Start Time: 01:13 PM, 26 August 2021

Question # 6 of 10 (Start time: 01:20:33 PM, 26 August 2021)

Total Marks: 1

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

Select the correct option

Reload Math Equations

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

Click to Save Answer & Move to Next Question

MC200203833: FAIZAN HASSAN

Time Left 87 sec(s)

MTH642:Quiz #3

Quiz Start Time: 01:11 PM, 26 August 2021

Question # 2 of 10 (Start time: 01:12:15 PM, 26 August 2021)

Total Marks: 1

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

Select the correct option

Reload Math Equations

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