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NPTEL

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Courses » Introduction to Finite Volume Methods II

Announcements **Course** Ask a Question Progress FAQ

Unit 1 - How to access the portal

Register for Certification exam

Course outline

How to access the portal

- How to access the home page?
- How to access the course page?
- How to access the MCQ, MSQ and Programming assignments?
- How to access the subjective assignments?
- Quiz : Assignment 0

Week 1 - Linear solvers

Week 2 - Linear solvers + Convection term discretisation

Week 3 - Convection term discretisation

Assignment 0

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-02-04, 23:59 IST.

1) Euler equation can be used to solve *1 point*

- Inviscid irrotational flow
- Inviscid flow
- potential flow
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of the above

2) A Fluid flow is considered incompressible when *1 point*

- M<1
- M<0.5
- M<0.3
- M<0.1

No, the answer is incorrect.
Score: 0

Accepted Answers:
M<0.3

3) Parabolic partial differential equations exhibit *1 point*

- 1 characteristic line
- 2 characteristic line
- 3 characteristic line

4) The PDE $\frac{\partial^2 u}{\partial t^2} + c^2 \frac{\partial^2 u}{\partial x^2} = 0$ is an example of ***1 point***

- Parabolic PDE
- Hyperbolic PDE
- Elliptic PDE
- This is not a PDE

No, the answer is incorrect.
Score: 0

Accepted Answers:
Hyperbolic PDE

5) Stagnation enthalpy is always ***1 point***

- more than static enthalpy
- more than or equal to static enthalpy
- less than static enthalpy
- less than or equal to static enthalpy

No, the answer is incorrect.
Score: 0

Accepted Answers:
more than or equal to static enthalpy

6) Unsteady diffusion equation in 2 dimensions (2D) is ***1 point***

- Parabolic in time and elliptic in space
- Parabolic in time and space
- Elliptic in time and space
- Elliptic in time and parabolic in space

No, the answer is incorrect.
Score: 0

Accepted Answers:
Parabolic in time and elliptic in space

7) Which is not true in the framework of computational fluid dynamics (CFD) ***1 point***

- Numerical solution to problem whose analytical solution is not available can be found out
- Numerical solutions are safe to obtain which may be unavailable at some points in the domain of interest
- Numerical solution to problems are obtained where conducting experiments is difficult and expensive
- Partial differential equations are converted in system of linear equations

No, the answer is incorrect.
Score: 0

Accepted Answers:
Numerical solutions are safe to obtain which may be unavailable at some points in the domain of interes

8) The number of grid points in the stencil for discretized (second order central difference) one dimensional steady diffusion equation are ***1 point***

- 3
- 5
- 6

7

No, the answer is incorrect.
Score: 0

Accepted Answers:
3

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