

QUIZ NO: 452

TOPIC: FLUID MECHANICS

DATE: 8/06/2021

1. In a free vortex motion, tangential component of the water particle is proportional to

[A] Distance from centre (R)

[B] R^2

[C] R^3

[D] $1/R$

Answer: D

2. If the weight of a body immersed in a fluid exceeds the buoyant force then the body will:

[A] Tend to move downward and it may finally sink.

[B] Float on the fluid

[C] Rise until its weight equals the buoyant force.

[D] Turn upside down

Answer: A

3. The head over a “V” notch at the end of a channel is 75 cm. If an error of 0.15cm., is possible in the measurement of the head, then the percentage error in computing the discharges is :

[A] 0.33
[B] 0.5
[C] 1.00
[D] 1.50

Answer: B

4. In a laminar flow through a circular pipe of diameter 20 cm., the maximum velocity is found to be 1m/sec. The velocity at a radial distance 5 cm from the axis of the pipe is:

[A] 0.25m/sec
[B] 0.25m/sec
[C] 0.5m/sec
[D] 0.75m/sec

Answer: D

5. A model of a reservoir is emptied in 10 minutes, If the model scale is 1:25, the time taken by the prototype to empty itself would be :

- [A] 250 minutes
- [B] 50 minutes
- [C] 6250 minutes
- [D] 2 minutes

Answer: B

6. When the Mach number is more than 6, the flow of a fluid is called:

- [A] Subsonic flow
- [B] Sonic flow
- [C] Supersonic flow
- [D] Hypersonic flow

Answer: D

7. Venturimeter is used to measure:

- [A] Discharge
- [B] Average velocity
- [C] Velocity at a point
- [D] Pressure at a point

Answer: A

8. The ratio of Inertia force of a fluid and its viscous force is called

- [A] Reynold's number
- [B] Froude's number
- [C] Euler's number
- [D] Weber's number

Answer: A

9. Loss of head due to velocity of water at the outlet of a pipe is :

- [A] $v^2/2g$
- [B] $1.5v^2/2g$
- [C] $0.5v^2/2g$
- [D] $v^2/3g$

Answer: A

10. For a floating body, if the meta centre is above the centre of gravity, the equilibrium called:

- [A] Stable
- [B] Unstable
- [C] Neutral
- [D] None of these

Answer: A

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