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NPTEL

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Courses » Hydrostatics and Stability

Announcements **Course** Ask a Question Progress Mentor FAQ

Unit 1 - How to access the portal

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?
- Quiz : Assignment 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Assignment 0

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2018-07-31, 23:59 IST.**

1) Law of floatation is also known as **1 point**

- a) Archimedes principle
- b) Newton's law
- c) Stein's law
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

a) *Archimedes principle*

2) When there are a lot of masses, the center of mass is defined as **1 point**

- a)

$$\frac{\sum mass * position}{\sum mass}$$

- b)

$$\frac{\sum mass * position}{\sum position}$$

- c) zero
- d) none of the above

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$$\frac{\sum mass * position}{\sum mass}$$

3) A body immersed in fluid floats if

1 point

- a) Weight is equal to buoyancy
- b) weight is greater than buoyancy
- c) Buoyancy is greater than weight
- d) None of the above

No, the answer is incorrect.**Score: 0****Accepted Answers:***a) Weight is equal to buoyancy*

4) What is the weight of the displaced water in question 3?

1 point

- a) Weight of the underwater volume
- b) weight of the floating body
- c) weight of an equivalent volume of solid
- d) none of the above

No, the answer is incorrect.**Score: 0****Accepted Answers:***b) weight of the floating body*

5) Parallel axis theorem is related to

1 point

- a) volume
- b) moment of inertia
- c) waterplane area
- d) none of the above

No, the answer is incorrect.**Score: 0****Accepted Answers:***b) moment of inertia*

6) For a body in water, the hydrostatic pressure is defined as (using standard notations)

1 point

- a) ρgh
- b) Vg
- c) Weight
- d) None of the above

No, the answer is incorrect.**Score: 0****Accepted Answers:***a) ρgh*

7) A vessel has displacement 6200 tonnes and KG 8.0 m. Suppose we distribute 9108 tonnes **1 point** of cargo between spaces KG1=0.59m and KG2=11.45m such that the vessel completes loading with a KG=7.57 m. The weight to be loaded at KG1=0.59m is

- a) 5000 tonnes
- b) 1243 tonnes
- c) 3496 tonnes
- d) 2435 tonnes

No, the answer is incorrect.

Score: 0

Accepted Answers:

c) 3496 tonnes

8) In the above problem, the weight to be loaded at KG2=11.45 m is

1 point

- a) 4108 tonnes
- b) 8000 tonnes
- c) 5612 tonnes
- d) 2143 tonnes

No, the answer is incorrect.

Score: 0

Accepted Answers:

c) 5612 tonnes

9) Which of the following are modes of equilibrium

1 point

- a) Stable
- b) unstable
- c) neutral
- d) all of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

d) all of the above

10) The second moment of area of a rectangle about its longitudinal axis is (when L and B are the length and breadth of the rectangle) **1 point**

- a) $LB^3/12$
- b) $BL^3/12$
- c) $LB/6$
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

a) $LB^3/12$

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