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Courses » Hydrostatics and Stability

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# Unit 11 - Week 10

## Course outline

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## Week 10 Assignment

**The due date for submitting this assignment has passed.**As per our records you have not submitted this assignment. **Due on 2018-10-10, 23:59 IST.**1) Questions 1-12 are from the following problem **1 point**The length of the assumed pontoon floating in sea water is  $L=20$  m, the beam,  $B=5$  m, and the draught in intact condition,  $T_I=1.5$  m. Let the vertical centre of gravity be  $KG_I=1.5$  m.

The intact displacement volume is

- a)  $250 m^3$
- b)  $120 m^3$
- c)  $150 m^3$
- d) none of the above

**No, the answer is incorrect.****Score: 0****Accepted Answers:****c)  $150 m^3$** 2) The moment of inertia of the waterplane area about the centreline equals **1 point**

- a)  $208.33m^4$
- b)  $120.22m^4$
- c)  $190.32m^4$

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3) The resulting metacentric radius is

1 point

- a) 2.39 m  
 b) 1.39 m  
 c) 1.88 m  
 d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) 1.39 m

4) The metacentric height is

1 point

- a) 0.43 m  
 b) 0.81 m  
 c) 0.64 m  
 d) none of the above

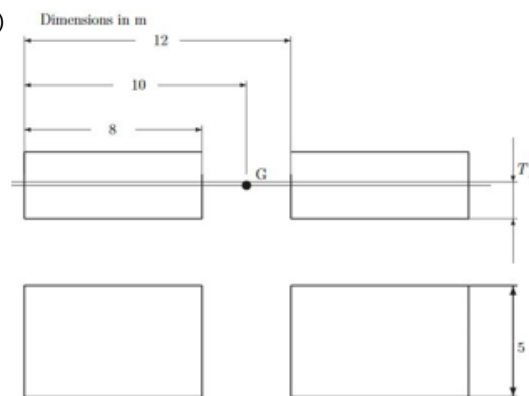
No, the answer is incorrect.

Score: 0

Accepted Answers:

c) 0.64 m

5)



1 point

A central compartment of length 4 m is flooded along the entire depth as shown in the above figure. In questions 5-8, use the method of lost buoyancy.

Moment of inertia of the waterplane now is

- a)  $200m^4$   
 b)  $216.67m^4$   
 c)  $412.77m^4$   
 d)  $166.67m^4$

No, the answer is incorrect.

Score: 0

Accepted Answers:

d)  $166.67m^4$

6) The metacentric radius now is

1 point

- a) 1.11m
- b) 2.11 m
- c) 1.41 m
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

a) 1.11m

7) The metacentric height is

1 point

- a) 0.14m
- b) 0.21 m
- c) 0.55 m
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

c) 0.55 m

8) Righting moment according to lost buoyancy method is

1 point

- a)  $84.349 \sin\phi \text{ t m}$
- b)  $74.213 \sin\phi \text{ t m}$
- c)  $21.32 \sin\phi \text{ t m}$
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)  $84.349 \sin\phi \text{ t m}$

9) In questions 9-12 use the method of added weight

1 point

The draft after flooding is

- a) 1.17 m
- b) 1.875 m
- c) 2.56 m
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) 1.875 m

10) The volume of flooding water is

1 point

- 
- a)  $37.5m^3$
- 
- b)  $27.5m^3$

- c)  $50m^3$
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)  $37.5m^3$

11) The displacement volume of the flooded pontoon is

1 point

- a)  $200.5m^3$
- b)  $275.4m^3$
- c)  $187.5m^3$
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)  $187.5m^3$

12) The metacentric height is

1 point

- a) 0.44 m
- b) 0.87 m
- c) 1.11 m
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

a) 0.44 m

13) In which of the methods should you include free surface effect?

1 point

- a) Lost buoyancy
- b) Added weight
- c) constant area
- d) none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) Added weight

14) Vertical center of gravity shifts for which method?

1 point

- a) Lost buoyancy
- b) Added weight
- c) constant area
- d) none of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*b) Added weight*

15) Volume of the compartment is lost in which method?

**1 point**

- a) Lost buoyancy
- b) Added weight
- c) constant area
- d) none of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*a) Lost buoyancy*

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