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NPTEL

Courses » **Hydrostatics and Stability**

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Unit 6 - Week 5

Week 5 Assignment

The due date for submitting this assignment has passed.   **Due on 2018-09-12, 23:59 IST.**
As per our records you have not submitted this assignment.

1) The righting lever of a ship under heeling is   *1 point*

   ○ a) GM

   ○ b) GZ

   ○ c) KG

   ○ d) GZsinφ

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) GZ

2) At small angles of heel, righting arm=   *1 point*

   ○ a) GMsinφ

   ○ b) GMcosφ

   ○ c) KGsinφ

   ○ d) KN

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) GMsinφ

3) Slope of the GZ curve at φ=0 °taken at 1 radian gives   *1 point*

   ○ a) sin φ

   ○ b) GM

   ○ c) heeling lever

   ○ d) none of the above

No, the answer is incorrect.
Score: 0

Session with Students

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⚪ c) Lolling

⚪ d) toppling

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Lolling

5) At the angle of loll, the ship's GM is   *1 point*

⚪ a) 0

⚪ b) negative

⚪ c) positive

⚪ d) large

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 0

6) A ship with an initial loll can be stabilized by   *1 point*

⚪ a) Listing

⚪ b) trimming

⚪ c) shifting weights

⚪ d) all the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) shifting weights

7) Shifting of weights vertically downwards causes GZ values in the GZ curve to be   *1 point*

⚪ a) increased

⚪ b) decreased

⚪ c) not change

⚪ d) none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) increased

8) Area under the GZ curve is called   *1 point*

⚪ a) Stability

⚪ b) Statical stability

⚪ c) dynamical stability

⚪ d) none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) dynamical stability

9) Dynamical stability concept is based on the conservation of   *1 point*

    ⚪ a) Momentum

    ⚪ b) energy

    ⚪ c) weight

    ⚪ d) stability

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) energy

10) Dynamical stability is weight*X where X is   *1 point*

    ⚪ a) GM

    ⚪ b) GZ

    ⚪ c) moment

    ⚪ d) KG

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) GZ

11) Questions 11-14 are from the below problem;   *1 point*

A vessel displacing 15000 tonnes has KG 7m. Cargo is redistributed to cause KG to rise by 0.25m. The values of GZ in the initial conditions were:

Heel (Degrees)	0	15	30	45	60	75	90
GZ M	0.00	0.391	1.000	1.138	0.774	0.129	-0.584

For the initial condition, the range of stability is:

    ⚪ a) 50

    ⚪ b) 63

    ⚪ c) 71

    ⚪ d) 78

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 78

12) For the final condition, the range of stability is   *1 point*

    ⚪ a) 34

    ⚪ b) 53

    ⚪ c) 60

    ⚪ d) 72

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 72

13) The angle at which maximum initial GZ occurs is   *1 point*

a) 12

b) 24

c) 42

d) 60

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) 42

14) 14. The initial $G_0 M_0$ is   *1 point*

a) 1.9 m

b) 2m

c) 0.1m

d) 1.3 m

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) 1.3 m

15) The angle of vanishing stability occurs at GZ=   *1 point*

a) 1

b) 0

c) undefined

d) none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) 0

Previous Page   End