

Seaworthiness questions

Question 1 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- | | |
|------------------------------------|-----------------------------|
| 1. Copper Nickel alloy | a. Does not corrode. |
| 2. Glass Reinforced Plastic (GRP). | b. Is easy to build with. |
| 3. Steel. | c. Has good fire resistance |
| 4. Timber | d. Is easily damaged. |

Question 2 (1 Mark)

Match each definition to the correct item below.

- | | |
|------------------|---|
| 1. Camber. | a. A narrow empty space between two bulkheads to prevent leakage between adjacent compartments. |
| 2. Chain locker. | b. A sharp change in the transverse shape of a vessel's hull plating. |
| 3. Chine. | c. A compartment in the forward lower portion of a ship, in which the anchor chain is stored. |
| 4. Cofferdam. | d. The transverse curvature of a deck. |

Question 3 (1 Mark)

A stiff ship is caused by:

- the centre of gravity being too low.
- the centre of gravity being too high.
- the centre of buoyancy being too low.
- the centre of buoyancy being too high.

Question 4 (2 Marks)

Explain briefly why it is dangerous to allow too many passengers on the upper deck or flying bridge of a vessel.

Question 5 (1 Mark)

Identify the following parts of a vessel by inserting the appropriate numerals from the diagram above. The Deck Planking is _____ and the Hanging Knee is _____

Question 6 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- | | |
|------------------------------------|--|
| 1. Ferro Cement. | a. Is heavy. |
| 2. Aluminium. | b. Is cheap. |
| 3. Glass Reinforced Plastic (GRP). | c. Is easily repaired. |
| 4. Steel. | d. Is immune to attacks by marine organisms. |

Question 7 (1 Mark)

Match each definition to the correct item below.

- | | |
|-------------------|---|
| 1. Sheer. | a. The rise of the bottom plating above the base line measured at the line of moulded beam. |
| 2. Rake. | b. The inward curvature of the hull above the summer waterline. |
| 3. Rise of Floor. | c. The fore-and-aft curvature of a deck. |
| 4. Tumblehome. | d. The amount by which a mast, funnel or stern slopes from the vertical line. |

Question 8 (1 Mark)

In the diagram above, the part of a vessel identified by the letter A is a _____ and by the letter B is _____

Question 9 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- | | |
|------------------------------------|---|
| 1. Aluminium. | a. Is light. |
| 2. Glass Reinforced Plastic (GRP). | b. Is open to attack by marine organisms. |
| 3. Steel. | c. Is light and easy to work. |
| 4. Timber. | d. Has good fire resistance. |

Question 10 (1 Mark)

Match each definition to the correct item below.

- | | |
|--------------|--|
| 1. Gunwhale. | a. Fore and aft structural members tying frames together. |
| 2. Rake. | b. An above deck extension at the side of vessels to prevent loss of persons or equipment overboard. |
| 3. Bulwark. | c. A protective board fitted to the sheer plank. |
| 4. Stringer. | d. The amount by which a structural member slopes from the vertical. |

Question 11 (1 Mark)

In the diagram above, the part of a vessel identified by the letter E is a _____ and by the letter F is a _____

Question 12 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- | | |
|------------------------------------|--|
| 1. Ferro Cement. | a. Is immune to attacks by marine organisms. |
| 2. Aluminium. | b. Is easily repaired. |
| 3. Glass Reinforced Plastic (GRP). | c. Is cheap. |
| 4. Steel. | d. Is heavy. |

Question 13 (1 Mark)

Match each definition to the correct item below.

- | | |
|------------------------|--|
| 1. Athwartships. | a. A weight or weights used to increase the draft or lower the ship's centre of gravity. |
| 2. Ballast. | b. A watertight bulkhead within 7½% of the length of a vessel from forward. |
| 3. Collision Bulkhead. | c. At right angles to the fore and aft line. |
| 4. Deck Beam. | d. A beam running athwartships supporting the deck. |

Question 14 (1 Mark)

Identify the following parts of a vessel by inserting the appropriate numerals from the diagram above. The Deck Beam is _____ and Frame Timber is _____

Question 15 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- | | |
|-------------------------|-------------------------|
| 1. Copper/Nickel Alloy. | a. Is easily damaged. |
| 2. Aluminium. | b. Is moderately heavy. |
| 3. Timber. | c. Can chip easily. |
| 4. Ferro Cement. | d. Rots. |

Question 16 (1 Mark)

Match each definition to the correct item below.

- | | |
|--------------|--|
| 1. Gunwhale. | a. The amount by which a structural member slopes from the vertical. |
| 2. Rake. | b. Fore and aft structural members tying frames together. |
| 3. Bulwark. | c. A protective board fitted to the sheer plank. |
| 4. Stringer. | d. An above deck extension at the side of vessels to prevent loss of persons or equipment overboard. |

Question 17 (1 Mark)

In the diagram above, the part of a vessel identified by the letter C is a _____ and by the letter D is a _____

Question 18 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- 1. Ferro Cement.
 - 2. Aluminium.
 - 3. Glass Reinforced Plastic (GRP).
 - 4. Steel.
- a. Is easily repaired.
 - b. Is immune to attacks by marine organisms.
 - c. Is cheap.
 - d. Is heavy.

Question 19 (1 Mark)

Match each definition to the correct item below.

- 1. Sponson.
 - 2. Scupper.
 - 3. Coaming.
 - 4. Intercostal longitudinal.
- a. Fender fitted to hull to prevent chafing and damage.
 - b. Raised edge around an opening to help prevent water entry.
 - c. Drain from weather decks to carry off water.
 - d. A structural member fitted in short lengths between frames.

Question 20 (1 Mark)

A stiff ship is caused by:

- a. the centre of gravity being too high.
- b. the centre of buoyancy being too high.
- c. the centre of buoyancy being too low.
- d. the centre of gravity being too low.

Question 21 (2 Marks)

Describe how you can ensure that your vessel has sufficient stability to embark on a day charter operation.

Question 22 (1 Mark)

In relation to vessel construction materials, match each material to the correct response below.

- | | |
|-------------------------|-------------------------|
| 1. Copper/Nickel Alloy. | a. Rots. |
| 2. Aluminium. | b. Can chip easily. |
| 3. Timber. | c. Is moderately heavy. |
| 4. Ferro Cement. | d. Is easily damaged. |

Question 23 (1 Mark)

Match each definition to the correct item below.

- | | |
|------------------------|--|
| 1. Athwartships. | a. A watertight bulkhead within $7\frac{1}{2}\%$ of the length of a vessel from forward. |
| 2. Ballast. | b. A beam running athwartships supporting the deck. |
| 3. Collision Bulkhead. | c. A weight or weights used to increase the draft or lower the ship's centre of gravity. |
| 4. Deck Beam. | d. At right angles to the fore and aft line. |

Question 24 (1 Mark)

Describe the purpose of:

Margin Plate is to _____

Stringers are to _____

Question 25 (1 Mark)

Increasing the design draught of a vessel requires:

- a decrease in scantlings.
- an increase in scantlings.
- a lengthening of longitudinals.
- a shortening of side frames