

Demo PDF file. This file includes questions: 10 from 190. Full version of file looks the same as demo, but full version includes all questions. You may download file with all questions by link on bottom of this page

Q683 - Engineering Safety & Environmental Protection

1. In a compartment that has been completely flooded with water, the greatest pressure will be exerted _____.

- at a point that is one-third from the bottom of the bulkhead
- at the vertical center of the bulkhead
- **along the bottom of any bulkhead**
- along the top of the bulkhead

Note:

Hydrostatic pressure increases with depth; therefore, the greatest pressure in a flooded compartment is exerted along the bottom of any bulkhead.

2. If a cargo tank has not been certified as gas free, _____.

- breathing apparatus would not be necessary in an emergency as you would only be in the tank a short time
- entry without a breathing apparatus may be made at the top of the tank since petroleum vapors are heavier than air
- **breathing apparatus should always be used**
- a man may work safely without breathing apparatus in cold weather, as vapors are less volatile

Note:

A cargo tank lacking gas-free certification presents a potentially toxic or oxygen-deficient atmosphere, mandating the use of breathing apparatus for entry.

3. During fueling operations oil is detected in the water adjacent to your vessel. If however, it is determined to be from some source other than your vessel, you should _____.

- secure operations until the exact type of oil is determined
- **notify the Coast Guard**
- make an entry in the Oil Record Book to that effect
- all of the above

Note:

Observed oil pollution must be reported promptly for investigation and cleanup; therefore, the Coast Guard should be notified even if the source is not your vessel.

4. During fueling operations, which of the listed precautions should be taken when topping off fuel tanks?

- Close all overflow valves.
- **Reduce the pumping rate and sound tanks frequently.**
- Reduce the pumping rate by closing the deck filling valve.
- Place 5-gallon containers under all flange connections in the fuel line.

Note:

Topping off fuel tanks requires reducing the pumping rate and frequently checking tank levels to prevent overfilling and spills; closing vents is unsafe, throttling valves improperly controls flow, and spill containers are ineffective.

5. After fuel tanks have been filled and bunkers completed, which of the listed procedures should be followed next?

- The tanks should be marked with a bull stamp on the manifold filling valve.
- The pressure-vacuum relief valve should be reset.
- The tanks should be made seaworthy to prevent contamination.
- **The tanks should be sounded to verify levels.**

Note:

Sounding tanks after bunkering verifies fuel levels and quantity, confirming no overfills or leaks.

6. If the overflow tank high-level alarm sounds while the fuel oil tanks are being topped off, the engineer should _____.

- close the static leg filling valve
- **stop the fuel oil pumping operation**
- reduce the fuel oil pumping rate
- close the overflow tank filling valve

Note:

A high-level alarm in the overflow tank indicates imminent overfilling; therefore, the fuel oil pumping operation must be immediately stopped to prevent overflow and potential pollution.

7. An LNG carrier has an approved type of gas detecting system to detect methane leaks in the _____.

- cargo handling rooms
- boiler burner supply piping
- barrier spaces
- **all of the above**

Note:

Methane detection systems are required on LNG carriers in all gas-hazard locations, including cargo handling rooms, boiler burner supply piping, and barrier spaces. Therefore, 'all of the above' is the correct answer.

8. How would you ensure that your crew is prepared to combat a shipboard fire using ship's equipment?

- Show crew generic fire training videos.
- Have them read a firefighting textbook.
- **Conduct required drills, simulating fire conditions and training with ship's equipment.**
- Check training records, to see if crew members have attended a firefighting training course.

Note:

Realistic drills using the ship's equipment are essential to ensure crew preparedness for a shipboard fire, verifying their ability to operate the equipment and follow procedures under simulated emergency conditions, as mandated by regulations.

9. Before entering any space that has been sealed, its oxygen level should be tested. What level of oxygen in the space is equal to fresh air?

- 10.0%
- 15.8%
- **20.8%**
- 25.8%

Note:

Fresh air contains approximately 20.8% oxygen by volume; therefore, a space should have 20.8% oxygen to be considered equivalent to fresh air.

10. How does good housekeeping prevent fires on a vessel?

- Allowing better access in an emergency
- Improving personnel qualifications
- **Eliminating potential fuel sources**
- Eliminating trip hazards

Note:

Good housekeeping prevents fires by eliminating potential fuel sources, directly addressing the 'fuel' component of the fire triangle. Fire prevention focuses on controlling fuel and ignition sources, and good housekeeping practices like cleaning spills and properly storing combustibles reduce the risk of fire ignition or spread. Options related to emergency access, personnel qualifications, and trip hazards address safety and response, not primary fire prevention.
