
Q424 - Deck Safety

1. What is the function of wearing rings found on some centrifugal pumps?

- Absorb erosion of high-velocity discharge stream
- Seal pump shaft against entry of air
- **Isolate the outlet side from the inlet side**
- Dampen the turbulent discharge flow

Note:
Wearing rings in centrifugal pumps isolate the high-pressure discharge side from the low-pressure suction side, minimizing internal leakage and maintaining pump efficiency. They are replaceable components designed to limit flow between these pressure zones, unlike shaft seals or flow dampeners.

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2. Which visual distress signal is acceptable for daylight use only?

- Hand-held red flare
- Red aerial pyrotechnic flare
- Self-contained rocket-propelled parachute red flare
- **Hand-held orange smoke distress flare**

Note:
Hand-held orange smoke distress flares are approved for daylight use only, unlike red flares which are designed for nighttime or dual-use applications. Coast Guard regulations categorize visual distress signals as day, night, or dual-use, with orange smoke specifically designated for daytime visibility due to its effectiveness in sunlight and ineffectiveness at night.

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3. How can you indicate that your vessel is in distress?

- Displaying a large red flag
- Displaying three black balls in a vertical line
- **Continuously sounding the fog whistle**
- Sounding five or more short and rapid blasts on the whistle

Note:
A continuous sounding of fog-signalling apparatus is a recognized distress signal according to Navigation Rules Annex IV. Other options are incorrect: a red flag is not a distress signal, three black balls indicate a vessel aground, and five rapid blasts signal danger or doubt.

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4. A fire of escaping liquefied flammable gas is best extinguished by which action?

- Cooling the gas below the ignition point
- Cutting off the supply of oxygen
- Interrupting the chain reaction
- **Stopping the flow of gas**

Note:
Stopping the flow of gas eliminates the fuel source, extinguishing the fire and preventing re-ignition from the leak.

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5. What is LEAST likely to cause ignition of fuel vapors?

- **Explosion proof lights**
- An open running electric motor
- Static electricity
- Loose wiring

Note:
Explosion-proof lights are designed to prevent ignition of surrounding fuel vapors, making them the least likely ignition source compared to open electric motors, static electricity, or loose wiring.

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6. If you see an individual fall overboard, you should _____.

- throw a life ring overboard
- pass the word to the bridge
- hail "Man Overboard"
- **all of the above**

Note:
When someone falls overboard, immediately hail 'Man Overboard,' throw a life ring, and alert the bridge to ensure a coordinated rescue response.

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7. If you must jump from a vessel, what does the correct posture include?

- Body straight and arms held tightly at the sides for feet first entry into the water
- Knees bent and held close to the body with both arms around legs
- Both hands holding the life preserver below the chin with knees bent and legs crossed
- **Holding down the life preserver against the chest with one arm crossing the other, covering the mouth and nose with a hand, and feet together**

Note:
The correct jumping posture involves holding the life preserver against the chest, protecting the mouth and nose, and keeping feet together to ensure a safe, feet-first entry and airway protection.

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8. A vessel behaves as if all of its weight is acting downward through the center of gravity, and all its support is acting upward through which point?

- **The center of buoyancy**
- The keel
- The tipping center
- The amidships center section

Note:
The buoyant force acts upward through the center of buoyancy, which is the geometric center of the submerged hull volume. This point represents the upward support balancing the vessel's weight, acting downward through the center of gravity. The keel, tipping center, and amidships center section are structural or geometric locations, not the point of action for the buoyant force.

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9. The water in which a vessel floats provides vertical upward support. The point through which this support is assumed to act is known as the center of _____.

- effort
- gravity
- flotation
- **buoyancy**

Note:
The buoyant force, which is the upward support from the water, acts through the center of buoyancy. This point represents the centroid of the submerged volume and is where the upward force is considered to act.

10. Which term defines the upward pressure of displaced water of a vessel?

- **Buoyancy**
- Deadweight
- Draft
- Freeboard

Note:
Buoyancy is the correct answer; it defines the upward force exerted by displaced water on a vessel, as described by Archimedes' principle. Deadweight refers to a ship's carrying capacity, draft and freeboard describe hull measurements, and do not relate to the upward pressure of water.