
Q411 - 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. 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.

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3. Which signaling device(s) is/are required on inflatable liferafts?

- An oil lantern
- A rocket shoulder rifle
- **Hand flares**
- An air horn

Note:
Inflatable liferafts are required to carry hand flares as part of their standard equipment to meet SOLAS and U.S. regulations.

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4. A fire in a pile of dunnage would be classified as a _____.

- **class "A"**
- class "B"
- class "C"
- class "D"

Note:
Dunnage, typically wood, is an ordinary combustible material and therefore classified as a Class A fire, which involves wood, paper, textiles, and rubbish.

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5. Fires are grouped into what categories?

- **Class A, B, C, and D**
- Type 1, 2, 3, and 4
- Combustible solids, liquids, and gases
- Flammable solids, liquids, and gases

Note:
Fires are classified by class (A, B, C, D), not by type numbers or fuel state descriptions. Class A fires involve ordinary combustibles, Class B involve flammable liquids, Class C involve energized electrical equipment, and Class D involve combustible metals. The correct answer identifies this standard classification system.

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6. Which of the listed classes of fire would most likely occur in the engine room of a vessel?

- Classes "A" and "B"
- **Classes "B" and "C"**
- Classes "C" and "D"
- Classes "A" and "D"

Note:
Engine rooms contain flammable liquids and energized electrical equipment, making Class B and Class C fires the most likely.

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7. When compared to low-expansion foam, a high-expansion foam will _____.

- be heavier
- **be drier**
- not cling to vertical surfaces
- be more heat resistant

Note:
High-expansion foam contains more air and less water per volume than low-expansion foam, resulting in a drier foam.

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8. Which portable fire extinguisher should be used on a class C fire on board a vessel?

- **Carbon dioxide**
- Foam
- Carbon tetrachloride
- Water (stored pressure)

Note:
Carbon dioxide extinguishers are appropriate for Class C fires because they are non-conductive and safe for use on energized electrical equipment. Water, foam, and carbon tetrachloride are unsuitable due to electrical conductivity, toxicity, or obsolescence.

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9. How can the spread of fire be prevented?

- Cooling surfaces adjacent to the fire
- Shutting off the oxygen supply
- Removing combustibles from the endangered area
- **All of the above**

Note:
Fire spread is prevented by reducing heat, fuel, or oxygen. Cooling surfaces, removing oxygen, and removing combustibles are all effective methods; therefore, the correct answer is all of the above.

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10. Convection spreads a fire by _____.

- burning liquids flowing into another space
- **heated gases flowing through ventilation systems**
- the transfer of heat across an unobstructed space
- transmitting the heat of a fire through the ship's metal

Note:
Convection spreads a fire through the movement of heated gases, such as smoke and fumes, flowing through ventilation systems, which ignite combustibles in new areas.
