
Q181 - 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. When supplemented by a comparable signal on the general alarm, what is the signal for boat stations or boat drill?

- **More than six short blasts followed by one long blast of the whistle**
- One long blast followed by three short blasts of the whistle
- A continuous blast of the whistle for a period of not less than 10 seconds
- Three short blasts of the whistle

Note:
The signal for boat stations or a boat drill, when accompanied by a similar signal on the general alarm, is more than six short blasts followed by one long blast of the whistle, as defined by SOLAS.

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4. What is the signal given to commence lowering the lifeboats?

- 3 short blasts of the ship's whistle
- **1 short blast of the ship's whistle**
- 3 long blasts of the ship's whistle
- 1 long blast of the ship's whistle

Note:
The signal to commence lowering lifeboats is one short blast of the ship's whistle. This signal is distinct from the general emergency alarm, which is seven or more short blasts followed by one long blast, and is used after passengers have boarded the lifeboats.

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5. A magnesium fire is classified as class _____.

- Class A
- Class B
- Class C
- **Class D**

Note:
Magnesium fires are classified as Class D because magnesium is a combustible metal. Class D fires specifically involve combustible metals like magnesium, while Class A covers ordinary combustibles, Class B covers flammable liquids and gases, and Class C covers energized electrical equipment.

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6. Which defines the "flammable limits" of an atmosphere?

- The upper and lower pressures between which an atmosphere will not burn
- The two temperatures between which an atmosphere will self-ignite
- The two temperatures between which an atmosphere will burn if an ignition source is present
- **The upper and lower percentage of vapor concentrations in an atmosphere which will burn if an ignition source is present**

Note:
Flammable limits define the range of vapor concentrations in air that will burn with an ignition source.

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7. 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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8. Recharging a previously used cartridge-operated dry chemical fire extinguisher is accomplished by _____.

- recharging the cartridge and refilling it with powder
- **replacing the propellant cartridge and refilling it with powder**
- puncturing the cartridge seal after installation
- authorized fire equipment servicing personnel only

Note:
Cartridge-operated dry chemical fire extinguishers are recharged by replacing the propellant cartridge and refilling the cylinder with dry chemical powder.

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9. To prevent the spread of fire by convection you should _____.

- **close all openings to the area**
- shut off electrical power
- cool the bulkhead around the fire
- remove combustibles from direct exposure

Note:
Convection spreads fire through the movement of hot gases; therefore, closing all openings to the affected area is the most effective method to prevent its spread.

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10. Fire dampers prevent the spread of fire by _____.

- radiation
- conduction
- **convection**
- direct contact

Note:
Fire dampers prevent the spread of fire by interrupting convective heat transfer through ventilation ducts.
