



Advanced Fire Fighting (AFF)**30 Practice Questions and Answers for STCW Exams***Updated for DG Shipping India Exams | Source: brightmariner.com*

Practice Set 1

Q1. What is the primary purpose of boundary cooling during a fire on a ship?

- A) To minimize smoke production
- B) To accelerate the combustion process
- C) To increase the temperature inside the compartment
- D) To prevent fire spread by cooling adjacent surfaces

Correct Answer: D (To prevent fire spread by cooling adjacent surfaces)

Explanation: Boundary cooling involves applying water to surfaces adjacent to a fire. Its primary purpose is to absorb heat, preventing transfer via conduction, convection, and radiation, thereby inhibiting the fire from spreading to new compartments or fuel sources. This maintains the structural integrity and confines the fire.

Q2. In advanced firefighting, what is the purpose of using a Class A foam?

- A) To neutralize acidic fumes
- B) To control oil and fuel fires
- C) To cool down hot surfaces
- D) To suppress flammable gas release

Correct Answer: B (To control oil and fuel fires)

Explanation: Class B foam is specifically designed for flammable liquid fires (oil, fuel, grease), forming a blanket that separates the fuel from oxygen and cools the surface. This creates a vapor seal to prevent reignition. Class A foam is generally for ordinary combustibles like wood or paper.

Q3. During a firefighting operation, what does the term "smoke curtain" refer to?

- A) cloud of water droplets to control temperature
- B) A curtain made of fire-resistant material to contain smoke
- C) A warning signal for evacuation
- D) A physical barrier to prevent the entry of firefighters

Correct Answer: B (A curtain made of fire-resistant material to contain smoke)

Explanation: A smoke curtain, often part of a ship's passive fire protection system, is a flexible, fire-resistant barrier. Its purpose is to automatically deploy and contain smoke and hot gases, preventing their spread to other areas, thereby improving visibility and maintaining tenable conditions for escape.



- A) Foam monitors
- B) Fire extinguishers
- C) Fire hoses
- D) Breathing apparatus

Correct Answer: D (Breathing apparatus)

Explanation: Breathing apparatus (BA) is essential for firefighters entering confined or smoke-filled spaces where oxygen levels may be depleted or toxic gases are present. It provides an independent supply of breathable air, ensuring the safety and operational effectiveness of personnel in hazardous atmospheres.

Q5. What is the primary purpose of the International Shore Connection (ISC) on a ship?

- A) To connect with the shore power supply
- B) To supply freshwater to the crew
- C) To enhance communication with nearby vessels
- D) To facilitate shore-based firefighting assistance

Correct Answer: D (To facilitate shore-based firefighting assistance)

Explanation: The International Shore Connection (ISC), mandated by SOLAS, is a standardized flange on ships. Its primary purpose is to connect the ship's fire main to a shore-based water supply or another vessel's fire main, enabling external firefighting assistance if the ship's pumps are insufficient or incapacitated.

Q6. In advanced firefighting, what is the purpose of using a water fog nozzle?

- A) To increase the range of water projection
- B) To create a visual signal for distress
- C) To create a dense fog for cooling purposes
- D) To generate a fine mist for fire suppression

Correct Answer: D (To generate a fine mist for fire suppression)

Explanation: A water fog nozzle disperses water into fine droplets, creating a large surface area for rapid heat absorption and conversion into steam. This rapidly cools the fire, displaces oxygen, and can protect firefighters from radiant heat, making it effective for general fire suppression and boundary cooling.

Q7. What is the role of a fire blanket in firefighting?

- A) To smother small fires by cutting off the oxygen supply
- B) To cool down hot surfaces in a fire-affected area
- C) To create a barrier against radiant heat
- D) To provide an escape route for trapped personnel

Correct Answer: A (To smother small fires by cutting off the oxygen supply)

Explanation: A fire blanket is used to smother small fires, particularly those involving cooking oil or clothing, by cutting off the oxygen supply. Made of fire-resistant material, it forms an airtight seal over the flames, interrupting the combustion process effectively and safely.

Q8. In the context of firefighting, what does the acronym PASS stand for?

- A) Pull, Aim, Squeeze, Sweep
- B) Pressure Application Safety System
- C) Portable Aqueous Suppression System
- D) Primary Air Supply Source

Correct Answer: A (Pull, Aim, Squeeze, Sweep)



Q9. What is the purpose of a fire screen in advanced firefighting?

- A) To detect flammable gases
- B) To separate different compartments for ventilation
- C) To extinguish fires through a fine mist
- D) To protect firefighters from radiant heat

Correct Answer: D (To protect firefighters from radiant heat)

Explanation: A fire screen, or thermal barrier, is utilized to shield firefighters from intense radiant heat emanating from a fire. It allows personnel to approach closer to the fire source for more effective direct attack, while significantly reducing the risk of heat-related injuries and fatigue.

Q10. When using a fire hose, what is the recommended nozzle pattern for initial cooling of a fire in a confined space?

- A) Straight stream
- B) Cone spray
- C) Fog pattern
- D) Solid stream

Correct Answer: C (Fog pattern)

Explanation: For initial cooling in a confined space, a fog pattern nozzle is recommended. The fine water droplets rapidly absorb heat and turn into steam, displacing oxygen and pushing back heat and smoke, thereby improving conditions for firefighters and preventing flashover.

Q11. In advanced firefighting, what is the primary function of a fire axe?

- A) Ventilating smoke from the compartment
- B) Applying foam to the fire
- C) Cutting through bulkheads and doors
- D) Spraying water in a concentrated stream

Correct Answer: C (Cutting through bulkheads and doors)

Explanation: A fire axe is a crucial tool for firefighters, primarily used for forcible entry, breaking through lightweight bulkheads, doors, or clearing obstructions to gain access to a fire. Its design enables effective penetration and leverage in emergency situations.

Q12. What does the term "fire tetrahedron" refer to in the context of firefighting?

- A) four-sided firefighting tool
- B) The four elements required for combustion
- C) A specialized firefighting drill
- D) A geometric shape used in fire suppression

Correct Answer: B (The four elements required for combustion)

Explanation: The fire tetrahedron illustrates the four components necessary for fire: heat, fuel, oxygen, and a chemical chain reaction. Removing any one of these elements will extinguish the fire, which forms the fundamental principle behind all firefighting strategies and agent selection.



- A) Foam extinguisher
- B) Dry powder extinguisher
- C) Water mist extinguisher
- D) CO2 (Carbon Dioxide) extinguisher

Correct Answer: D (CO2 (Carbon Dioxide) extinguisher)

Explanation: CO2 (Carbon Dioxide) extinguishers are specifically designed for electrical fires (Class C). Carbon dioxide is a non-conductive gas that smothers the fire by displacing oxygen without leaving a residue, making it ideal for protecting sensitive electrical equipment.

Q14. What is the purpose of a fireman's outfit (protective clothing) in advanced firefighting?

- A) To store firefighting tools
- B) To enhance physical agility
- C) To provide protection from heat and flame
- D) To identify firefighting personnel

Correct Answer: C (To provide protection from heat and flame)

Explanation: A fireman's outfit, mandated by SOLAS, provides essential personal protective equipment (PPE) for firefighters. It is constructed from heat-resistant materials to shield the wearer from high temperatures, flames, radiant heat, and minor mechanical hazards, ensuring safety during firefighting operations.

Q15. In the context of fire safety, what does the acronym "RECAAR" stand for?

- A) Rescue, Evacuation, Containment, Assessment, and Recovery
- B) Rescue, Evacuation, and Containment of Aerial Risks
- C) Response, Escape, and Control Against Adverse Reactions
- D) Rapid Escape and Control Against Radiant heat

Correct Answer: A (Rescue, Evacuation, Containment, Assessment, and Recovery)

Explanation: RECAAR is a structured approach to emergency response and incident management, particularly in maritime contexts. It stands for Rescue, Evacuation, Containment (of the incident), Assessment (of damage/situation), and Recovery (returning to normalcy), guiding comprehensive emergency procedures.

Q16. What is the purpose of a flame arrester in firefighting?

- A) To arrest the progression of flames in a compartment
- B) To control the spread of flammable liquids
- C) To provide visual cues during firefighting operations
- D) To enhance communication among firefighters

Correct Answer: B (To control the spread of flammable liquids)

Explanation: A flame arrester is a device fitted to tank vents or pipes carrying flammable vapors. Its primary purpose is to prevent the propagation of a flame through a flammable gas mixture by rapidly cooling the flame below its ignition temperature, thus stopping flashback or explosion.

Q17. During a shipboard fire emergency, what is the primary purpose of the muster list?

- A) To account for all personnel and passengers
- B) To allocate firefighting responsibilities
- C) To identify the location of fire hydrants
- D) To provide instructions for firefighting techniques

Correct Answer: A (To account for all personnel and passengers)

Q18. What is the recommended method for handling an injured person during a shipboard firefighting operation?

- A) Immediate evacuation to the shore
- B) Moving the person to a designated safe area
- C) Placing the person in a confined space
- D) Administering first aid at the fire location

Correct Answer: B (Moving the person to a designated safe area)

Explanation: During a shipboard fire, the immediate priority for an injured person is to move them quickly and safely to a designated safe area, away from direct fire hazards or smoke. Administering first aid should follow once the individual is in a secure environment.

Q19. Which firefighting agent is commonly used to suppress fires involving flammable metals?

- A) Foam
- B) Dry powder
- C) Water
- D) CO2 (Carbon Dioxide)

Correct Answer: B (Dry powder)

Explanation: Dry powder extinguishers (Class D) are specifically designed for fires involving combustible metals like magnesium, titanium, or sodium. These specialized powders smother the fire and form a crust that excludes oxygen, effectively suppressing these unique and intense fires.

Q20. What is the purpose of a fire control plan on a ship?

- A) To provide guidance for controlling and suppressing fires
- B) To outline emergency escape routes for passengers
- C) To specify the locations of fire alarm pull stations
- D) To identify the ship's navigation routes

Correct Answer: A (To provide guidance for controlling and suppressing fires)

Explanation: The fire control plan, prominently displayed on ships as per SOLAS, provides critical information on the ship's fire protection arrangements. It guides effective fire control and suppression by indicating locations of fire-extinguishing appliances, fire-resistant divisions, and means of escape.

Q21. What is the purpose of a deluge system in shipboard firefighting?

- A) To deliver a high-pressure water mist
- B) To control electrical fires with a dry powder
- C) To generate foam for flammable liquid fires
- D) To flood a compartment with water rapidly

Correct Answer: D (To flood a compartment with water rapidly)

Explanation: A deluge system is a fixed fire suppression system designed to rapidly discharge a large volume of water over a protected area or into a compartment. It's used in high-hazard areas to quickly cool and smother large fires or create an effective water barrier.

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Q22. During a shipboard firefighting operation, what is the primary function of a portable gas detector?

- A) To monitor radio communication
- B) To identify flammable gases
- C) To measure ambient temperature
- D) To locate fire hydrants

Correct Answer: B (To identify flammable gases)

Explanation: A portable gas detector is a vital piece of equipment used to monitor the atmosphere for the presence of flammable, toxic, or oxygen-deficient gases. It ensures the safety of personnel entering confined spaces or areas potentially affected by gas leaks during a fire emergency.

Q23. In the context of advanced firefighting, what is the purpose of a water curtain?

- A) To supply water to firefighting hoses
- B) To create a visual signal for distress
- C) To generate foam for liquid fires
- D) To create a barrier against radiant heat

Correct Answer: D (To create a barrier against radiant heat)

Explanation: A water curtain, formed by a series of nozzles spraying water, creates a dense sheet of water. This acts as a thermal barrier, absorbing radiant heat and protecting adjacent areas or personnel from intense heat radiation, thereby preventing fire spread or providing a safe egress path.

Q24. Which firefighting equipment is commonly used to cut ventilation openings in ship compartments?

- A) Water fog nozzle
- B) Hydraulic rescue tool
- C) Fire axe
- D) Thermal imaging camera

Correct Answer: B (Hydraulic rescue tool)

Explanation: Hydraulic rescue tools, such as spreaders and cutters, are powerful implements used for heavy-duty cutting and forcing open structural components. They are highly effective for cutting ventilation openings in robust ship compartments or structures where conventional tools are insufficient.

Q25. During a shipboard firefighting operation, what is the primary purpose of a positive pressure breathing apparatus (PPBA)?

- A) To maintain positive pressure inside the mask
- B) To prevent smoke from entering the mask
- C) To supply fresh air to the compartment
- D) To enhance communication among firefighters

Correct Answer: A (To maintain positive pressure inside the mask)

Explanation: A positive pressure breathing apparatus (PPBA) maintains a slightly higher pressure inside the mask than the ambient pressure. This crucial feature prevents toxic smoke or gases from leaking into the mask, even with minor seal imperfections, ensuring the wearer breathes only clean, supplied air.



- A) Stop the emergency fire pump motor
- B) Open the main engine fuel oil quick closing valve
- C) Discharge fixed CO2 into cargo holds
- D) Automatically start the emergency diesel generator and connect it to the emergency switchboard within 45 seconds

Correct Answer: D (Automatically start the emergency diesel generator and connect it to the emergency switchboard)

Explanation: SOLAS requires the emergency generator to start automatically and restore essential emergency power within 45 seconds of main power loss.

Q27. Under STCW Code Table A-VII/2, what is the mandatory requirement regarding deck and engine room operational protocols during Advanced Fire Fighting operations?

- A) Strict compliance with approved safety procedures and flag state regulations
- B) Optional adherence based on vessel size
- C) Applicable only during drydock operations
- D) Verbal recommendation without documentation

Correct Answer: A (Strict compliance with approved safety procedures and flag state regulations)

Explanation: STCW Code Table A-VII/2 mandates strict compliance with approved safety protocols for Advanced Fire Fighting.

Q28. What is the mandatory maintenance requirement under SOLAS Chapter II-2 for international shore connections on cargo ships?

- A) Kept readily accessible on deck with a gasket, bolts, and nuts ready for immediate use
- B) Stowed in the chief mate's office
- C) Kept in the paint locker
- D) Stored inside the engine room workshop

Correct Answer: A (Kept readily accessible on deck with a gasket, bolts, and nuts ready for immediate use)

Explanation: SOLAS requires the international shore connection to be kept readily accessible on deck along with its flange, gasket, 4 bolts, and 4 nuts.

Q29. What key responsibility belongs to seafarers performing watchkeeping duties for deck and engine room operational protocols under Advanced Fire Fighting?

- A) Continuous monitoring of operational parameters and immediate reporting of anomalies
- B) Operating equipment beyond design pressure limits
- C) Bypassing safety trips during routine operations
- D) Leaving watchkeeping station unattended

Correct Answer: A (Continuous monitoring of operational parameters and immediate reporting of anomalies)

Explanation: Continuous vigilance and prompt communication are core watchkeeping duties under STCW.

Q30. Which document contains detailed hazard data and emergency handling instructions for substances involved in deck and engine room operational protocols during Advanced Fire Fighting?

- A) Crew List document
- B) Bill of Lading description
- C) Safety Data Sheet (SDS) / Material Safety Data Sheet (MSDS)
- D) Ship's Cargo Manifest summary page

Correct Answer: C (Safety Data Sheet (SDS) / Material Safety Data Sheet (MSDS))

