Indian Maritime University
(A Ce5ntral University, Govt of India)
Sep/Oct'25 SE
Programme Name: B Tech (ME)
Semester: VI
Subject Code: UG11T4606
Subject Name: Shipboard Safety Management

Date: 24.10.2025 Max Marks: 70
Duration: 03 Hrs Pass Marks: 35

Section A

Answer all Questions
Choose the Correct Answer **[10 x 1 = 10 Marks]**

1. Emergency drills on a ship are important because:
(A) They are a good way to pass the time
(B) They help ensure the crew is prepared to handle emergency situations efficiently.
(C) They are required by law to entertain the passengers
(D) They provide exercise for the crew

2 What is the maximum weight of a Portable Extinguisher?
(A) 5 KG
(B) 9 KG
(C) 15 KG
(D) 23 KG

3. Which of the following statements is true regarding the frequency of abandon ship drills?
(A) They should be conducted only once a year.
(B) They must be conducted at least once every month.
(C) They are required weekly.
(D) They are optional and left to the discretion of the ship's captain.

4. During the maintenance of cross-flooding arrangements, which of the following should be checked?
(A) Blockages or obstructions in the passageways
(B) Proper functioning of automatic or manual valves
(C) Corrosion or structural damage
(D) All of the above

5. When launching a lifeboat or life raft in heavy weather conditions, which of the following is the safest approach?
(A) Launch the lifeboat immediately and let the waves carry it away from the vessel.
(B) Lower the lifeboat quickly without securing it to avoid damage from rough seas.
(C) Ensure all crew members board before launching and release it on the lee side of the vessel.
(D) Inflate the life raft on deck and throw it into the windward side for quick deployment.

6. Damage to compartments may cause a ship to sink due to progressive flooding. What is the primary reason for this?
(A) The ship's engines stop working.
(B) Excessive list or trim reduces stability, leading to further flooding.
(C) Water-tight doors prevent the spread of water.
(D) The ship's hull automatically repairs itself over time

7. How are Type A and Type B ships distinguished for the purpose of freeboard computation?
(A) Type A ships are passenger ships, while Type B ships are cargo ships.
(B) Type A ships have greater reserve buoyancy and stricter subdivision requirements than Type B ships.
(C) Type A ships are tankers with smaller freeboard, while Type B ships are general cargo ships with larger freeboard.
(D) Type A ships are always smaller in size compared to Type B ships

8. What is the significance of the 'Factor of Subdivision' in ship design?
(A) It determines the number of decks a ship must have.
(B) It influences the degree of watertight subdivision required for a ship's safety.
(C) It is used to calculate the ship's speed in different sea conditions.
(D) It defines the ship's fuel efficiency and consumption rates.

9. Which of the following is a key maintenance requirement for closing mechanisms like hatch covers and watertight doors?
(A) Applying grease to hinges and moving parts
(B) Checking for proper alignment and securing mechanisms
(C) Inspecting rubber gaskets for wear and tear
(D) All of the above

10. How are communications between the command team and the emergency teams typically carried out on a ship?
(A) By using visual signals such as flags and hand gestures.
(B) Through designated communication systems like VHF radios, internal telephones, and public address systems.
(C) By sending written messages through crew members.
(D) Through loudspeakers installed only in the engine room.

Section B

Answer all Questions **[5 x 2 = 10 Marks]**

11. What is the SOLAS training manual?
12. Discuss the ways by which a ship's crew can be motivated to participate in drills.
13. Describe methods of fighting fires
14. Explain the Maintenance Procedures for Life-Saving Appliances
15. What is meant by 'Permissible Length of Compartments in Passenger Ships?

Section C

Answer any 5 Questions **[5 x 10 = 50 Marks]**

16. a. Explain how to organize a fire drill on board a ship. (5 marks)
b. What are the critical steps involved in the routine maintenance and inspection of watertight doors on a maritime vessel? (5 marks)

17. a. What all means are provided on the vessel to control the spreading of fire from one compartment to another and write methods to limit the spread of fire? (5 mark)

b. Explain the SOLAS regulation for water-tight doors. (5 marks)

18. a. Explain means of limiting damage and salving the ship following a fire or explosion (5 marks)

b. Prepare schedules for the conduct of fire drills and abandon ship drills so that all required drills and equipment are covered within required timeframes (5 marks)

19. a. Prepare procedures and schedules for the maintenance of life-saving, fire-fighting and other safety systems on board (5 marks)

b. Explain how to prepare for the survey of life-saving, fire-fighting and other safety systems on board (5 marks)

20. a. Explain the specific duties assigned to some crew members for mustering and control of passengers (5 marks)

b. Prepare a contingency plan to deal with Piracy attack (5 marks)

21. a. Explain the composition (personnel and their duties) of command team, emergency team, back-up emergency team and engine-room emergency team (5 marks)

b. Prepare contingency plans to deal with fire and/or explosion (including coordination with shore facilities in port, taking account of the ship's fire control plan) in cargo space (5 marks)

22. a. Describe the requirements for survivability of Type B ships with reduced freeboard (5 marks)

b. Explain that damage to compartments may cause a ship to sink as a result of capsizing due to loss of stability and structural failure (5 marks)