
Indian Maritime University
(A Central University, Govt of India)

Mar/Apr/26 SE

Programme Name: B Tech (ME)

Semester: VI

Subject Code: UG11T4606

Subject Name: Shipboard Safety Management

Date: 23.03.2026

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

General Instructions

- (i) All Sections (A, B & C) are to be attempted.
(ii) Options, if any, are specified in respective section.

Section A

Ten MCQs/Fill in the Blanks of 01 Mark each – Choose the correct answer as applicable.

1. Emergency drills on a ship are important because:

- (A) They are a good way to pass the time
(B) They help ensure that 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. Safety equipment on board a ship must be:

- (A) Hidden to prevent theft
(B) Painted in bright colors only
(C) Regularly checked and maintained in a state of readiness
(D) Used only by senior officers

3. Who is responsible for providing a safe working environment on board the ship?

- (A) Only the captain
(B) Only the chief engineer
(C) Only the safety officer
(D) The shipping company and its employees
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4. Before conducting a fire drill on-board a ship, what is the first step that should be taken?

- (A) Sound the general alarm
- (B) Inform the port authorities
- (C) Prepare the firefighting equipment
- (D) Conduct a briefing for all crew members involved

5. 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.

6. Why is fuel oil not suitable for calming the sea surface?

- (A) It evaporates too quickly
- (B) It is too expensive for such use
- (C) It can cause severe environmental damage and pollution
- (D) It solidifies upon contact with seawater

7. According to SOLAS regulations, who must have access to the SOLAS Training Manual?

- (A) Only the captain and first officer
- (B) Only the safety officer and engineers
- (C) Every crew member on board
- (D) Passengers only

8. According to the SOLAS LSA Code, life jacket must be capable of turning an unconscious person into which position?

- (A) Face-down position
- (B) Horizontal position
- (C) Face-up position
- (D) Vertical position

9. According to SOLAS regulations, where are watertight doors usually located?

- (A) Only on the bridge
- (B) In the galley and dining areas
- (C) Below the waterline, in areas prone to flooding
- (D) On the outer deck for easy access to lifeboats

10. The use of water mist or fog for firefighting on ships is effective because.

- (A) It cools the fire and reduces the oxygen supply
 - (B) It is lighter than air and rises quickly to the ceiling
 - (C) It can be used to create a decorative effect
 - (D) It is the cheapest firefighting method
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Section B

Five Questions of 02 Marks each

11. What is SOLAS training manual?
12. Discuss the ways by which ship's crew can be motivated to participate in drills.
13. Classify firefighting system used on board a ship.
14. Describe briefly the significance of the factor of subdivision.
15. How inspection of portable DCP extinguisher will be carried out?

Section C

Seven Questions of 10 Marks each of which any 05 questions to be answered.

16. Organize a fire and abandon ship drill on-board a ship. (10 marks)
17. (a) What are the critical steps involved in the routine maintenance and inspection of watertight doors on a maritime vessel? (5marks)
- (b) SOLAS regulation for water tight door. (5 marks)
18. Prepare procedures and checklist for the inspection of Life-saving (4 marks), Firefighting (3 marks) and other safety systems on-board (3 marks).
19. (a) Explain means of limiting damage and salvaging the ship following a fire or explosion. (5 marks)
- (b) Explain the dangers of accumulated water from firefighting and describe how to deal with it. (5 marks)
20. Define following
- (a) Margin line (2 marks)
- (b) Permeability (2 marks)
- (c) Floodable length (2 marks)
- (d) Permissible length (2 marks)
- (e) Intact stability (2 marks)
21. (a) Describe the precaution to take before entry to a compartment where a fire has been extinguished. (6 marks)
- (b) Describe the inspection for damage. (4 marks)
22. (a) Describe the role of a shipboard safety committee in contingency planning. (5 marks)
- (b) Explain the concept of "risk assessment" in the context of shipboard safety management. (5 marks)

