

**Indian Maritime University**  
**(A Central University, Govt of India)**  
**End Semester Examinations – June 2024**

**Programme Name: B Tech (ME)**

**Semester: VI**

**Subject Code: UG11T4606**

**Subject Name: Shipboard Safety Management**

Date: 12.06.2024	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. What is the maximum weight of a Portable Extinguisher?  
(A) 5 KG (B) 9 KG (C) 15 KG (D) 23 KG
3. Co2 total flooding system is an effective system for firefighting on  
(A) in cargo hold dry cargo (B) above main deck (C) in paint locker  
(D) in monkey island
4. If some of the passenger is disabled i.e. using wheel chair, cane, blind etc. what precaution should the crew takes?  
(A) Passenger with some form of disability must travel with accompany, and live in the same cabin or next door.  
(B) Locate them in large cabin to ease their stay.

(C) All passenger that will require some form of assistance in case of evacuation etc. must be registered so there can be send a crew to assist them if needed.  
(D) They must be assign the cabin in the same level of muster stations.

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. If hull of the ship gets damaged out at sea the next action would be

- (A) Vessel permitted to reach next port with the temporary repair.
- (B) Vessel permitted to reach repair yard only on towage mode
- (c) Vessel permitted to reach next port only with the approval of flag state.
- (D) Vessel permitted to reach next port only with classification approval.

7. Contingency plans developed for the ships are

- (A) Non-modifiable
- (B) Amended by shipboard safety committee
- (C) Amended by duty officer.
- (D) Amended with flag-state approval.

8. HRU will function after a ship sinks to a depth above of:

- (A) 0.8 meter (B) 1.0meter (C) 1.2 meter (D) 1.5meter

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. volume of enclosed space or the part of ship above the waterline that can be made watertight is

- (A) freeboard (B) Permeability (C) Reserve buoyancy (D) None of the above

**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. why pyrotechnics required for lifeboat? and How many are required as per LSA code?
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 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. What all means provided on the vessel to control spreading of fire from one compartment to another and Write methods to limit the spread of fire?
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. (a) Explain the following terms (6 marks)  
(i) Margin line  
(ii) Permeability  
(iii) Intact stability  
(b) Describe the significance of the factor of subdivision. (4 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)