

**Indian Maritime University**  
**(A Central University, Govt of India)**  
**End Semester Examinations – June 2025**  
**Programme Name: B Sc (NS)**  
**Semester: VI**  
**Subject Code: UG21T5603**  
**Subject Name: Ship Maintenance and Emergencies**

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Date: 04.06.2025

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

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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. The Swedish standard Sa 2.5 refers to \_\_\_\_\_. (Loose scale removal, Hand tool cleaning, Very thorough blast cleaning, Flash rust removal)
2. Galvanic cell consists of two metals and an \_\_\_\_\_. (Electrode, Alkali, Binder, Electrolyte)
3. Inspections are carried out by \_\_\_\_\_ authorities to ensure foreign vessels comply with international regulations. (Flag state, PSC, SIRE inspectors, CDI inspectors)
4. \_\_\_\_\_ is the process of removing accumulated mud, sludge, or sediment from tanks and bilge areas. (Descaling, Desludging, De-mucking, Desilting)
5. The ICCP system applies a controlled electrical current to the hull to prevent \_\_\_\_\_. (Rust, Wear, current, marine growth)
6. The purpose of PMS is to shift from breakdown maintenance to \_\_\_\_\_ maintenance. (Delayed, Random, Planned, Reactive)
7. Ventilators including Fire Dampers, weather and water tight Doors, hatch covers, Air pipes, freeing ports, scuppers etc are part of \_\_\_\_\_ survey (SEQ, Load line, IOPP, Security)
8. The document required to certify good hygiene on board is the \_\_\_\_\_. (Safety Certificate, Sanitary Record, Housekeeping Certificate, Ship Sanitation Certificate)

9. \_\_\_\_\_ contains list of equipment's & emergency contact list of during Pollution. (VHF log, Deck log, Muster list, SOPEP)

10. IAMSAR Volume \_\_\_\_\_ Intended to be carried on rescue units, aircraft, and vessels to help with search, rescue, or on-scene coordinator functions. (I, II, III, IV)

### **Section B**

#### **Five Questions of 02 Marks each**

11. List any four types of marine paints and their specific uses.
12. Explain the importance of hydraulic systems inspections for cargo holds for leakage, especially in tween decks.
13. What are the contents of a muster list?
14. State any two precautions before entering a dry dock.
15. Illustrate the purpose of Ship Sanitation Certificate/Exemption Certificate.

### **Section C**

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

16. State the principle, advantages & disadvantages of Sacrificial Anode and Impressed Current systems. (10 marks)
17. (a) List common paint defects and state their causes. (5 marks)
17. (b) Suggest preventive measures for any two defects. (5 marks)
18. Appraise the Swedish standards of steel surface preparation such as St-2, St-3, Sa-2, Sa- 2.5, Sa- 3. (10 marks)
19. Distinguish the advantages of planned maintenance over breakdown maintenance. (10 Marks)
20. a) State the preparations for an SEQ Survey. (4 marks)
20. b) Mention any three LSA and FFA items and their respective checks for SEQ Survey. (6 marks)
21. a) Describe the procedure for abandoning ship. (5 Marks)
21. b) State actions to be taken as per contingency plans for emergencies such as Piracy Attack on the vessel, Rescue from Enclosed spaces (5 Marks)
22. a) Explain the role of ship's crew during emergencies as per muster list. (3 marks)
22. b) Describe the response procedure by crew for a piracy attack and enclosed space rescue (7 marks)