

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

End Semester Examinations – December 2025

Programme Name: B Tech (ME)

Semester: VII

Subject Code: UG11T4703

Subject Name: Management Principles of Ship Operation

Date: 10.12.2025	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. Engine-room Resource Management (ERM) is a part of
(A) SOLAS (B) MARPOL
(C) STCW (D) MLC (Maritime Labour Convention) 2006
2. As per the STCW Convention, minimum weekly rest hours must not reduce below:
A. 80 hours B. 78 hours C. 77 hours D. 72 hours
3. Title of SOLAS Chapter V is:
A. Carriage of Cargo B. General C. Specific Requirements D. Safety of Navigation
4. Non-technical skills for safe engineering watch as per ERM principles are
(A) Effective Communication (B) Assertiveness
(C) Situational Awareness (D) All of the above

5. National legislation that incorporate STCW requirements in Indian MET is

- (A) The Constitution of India (B) The Merchant Shipping Act, 2025
(C) The MLC 2006 (D) None of the above

6. Factors to be considered for a working team to be effective onboard

- (A) Certificate of seafarers (B) Experience of seafarers
(C) Capability of seafarers (D) All of the above

7. Good teamwork comprises:

- A. Hostile working B. Aggressive working C. Competition D.
Cooperation among members

8. The ISM Code requires inclusion of which in the Safety Management Manual?

- A. Port Authority list B. Financial records C. Emergency procedures D.
Cargo stowage plan

9. SOLAS Chapter III is related to:

- A. Fire Fighting Appliances B. SOPEP C. Oil Pollution D. Life Saving
Appliances

10. Risk Assessment and Management for on-board work is mandatory as per

- (A) ISM Code (B) STCW Code
(C) ISPS Code (D) IMDG Code

Section B

Five Questions of 02 Marks each

Answer all questions briefly. Each answer should be concise (about 2–4 lines).

11. What is SOP (Standard Operating Procedure) and its benefits?

12. Outline three specific duties of the Designated Person Ashore (DPA) under the ISM Code.

13. List four barriers to effective communication on board and give one practical method to overcome any one of them.

14. Why familiarization is required onboard and what should be familiarized?

15. What is the purpose of a toolbox meeting? Give three typical agenda items covered in a toolbox talk.

Section C

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

16. a) Explain Engine Room Resource Management (ERM) in terms of maintaining safe engineering watches.

b) Describe the different resources included in ERM. (7 + 3 marks)

17. Explain the ISM Code, its background, primary objectives, and 12 elements in brief.(10)

18. a) Enumerate the salient features of the STCW Convention and Code adopted at the Manila Conference 2010.

b) Discuss Risk Assessment and the Risk Matrix. (5 + 5 marks)

19.a) What is stress and fatigue and its adverse effect on seafarers on-board?

(b) Explain how on-board decision-making process can be improved

20. Explain the safety measures to be taken during shipboard repairs and maintenance.(10)

21 (a)What is the role of a leader? What leadership style is suitable when there are high safety risks and in emergencies? (5)

(b) What is harassment and bullying? What measures are being considered for elimination of this menace onboard ship? (5)

22. Discuss strategies that management-level officers can adopt to effectively manage crews of different cultures.(10)