

Indian Maritime University
(A Central University, Govt of India)
Sep/Oct'25 SE

Programme Name: B Tech (ME)
Semester: IV

Subject Code: UG11T4404

Subject Name: Marine Pollution Prevention and Safety

Date: 29.09.2025

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

Section A

Answer all Questions

Choose the Correct Answer [10 x 1 = 10 Marks]

- Administration surveyors when checking foreign Flag ships in their ports for compliance of international regulations such as MARPOL / SOLAS is called
(A) FSI (Flag State Inspection)
(B) PSI (Port State Inspection)
(C) Annual Survey
(D) Intermediate Survey
- Most harmful cargo (noxious liquid) carried in chemical tankers is under
(A) Z Category
(B) Y Category
(C) X Category
(D) OS
- The..... is a designated Particular Sensitive Sea Area by IMO.
(A) Great Barrier Reef
(B) Baltic Sea
(C) Black Sea
(D) Red Sea
- Oil Pollution Act 1990 is applicable to navigable waters of
(A) Europe
(B) USA
(C) United Kingdom
(D) None of the above
- Which certificate under MARPOL has no Annual or Intermediate inspections?
(A) International Oil Pollution Prevention Certificate
(B) International Sewage Pollution Prevention Certificate
(C) International Air Pollution Prevention Certificate
(D) None of the above
- Fuel oil sludge from purifiers when incinerated onboard should be recorded in
(A) Oil Record Book No. I
(B) Oil Record Rook No. II
(C) Ballast Water Record Book
(D) Cargo Record Book
- Fouling of a ship's hull can be prevented by

- (A) Bottom Painting with Anti-Fouling Paint
 - (B) Marine Growth Prevention System such as Impressed Current System
 - (C) Ship's Hull Cleaning
 - (D) All of the above
8. As per ISM code maintenance program for the machinery is responsibility of
- (A) Flag State
 - (B) Ship Manager
 - (C) Machinery Maker
 - (D) Classification Society
9. The main source of contamination due to harmful invasive species is by
- (A) Cargo
 - (B) Ballast Water
 - (C) Ship's Accommodation
 - (D) None of the above
10.procedure enables an operator to effectively isolate dangerous machinery before commencing with their maintenance
- (A) Lock Out-Tag Out
 - (B) Lock In-Tag In
 - (C) Look Out-Tag In
 - (D) All of the above

Section B

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

- 11. Define Special Area as per MARPOL
- 12. State the full form of SOPEP and explain its purpose
- 13. What are the criteria needs to be fulfilled for the discharge of Sewage from ships?
- 14. What are the criteria needs to be fulfilled for the discharge of Garbage from ships?
- 15. State Documents and Certificate required onboard under BWM Convention

Section C

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

- 16 (a) Explain requirements for control of emissions from ships as per MARPOL Annex VI (7 Marks)
- (b) What is Maritime Casualty as per CLC 1969? (3 Marks)
- 17 (a) Draw and Explain Oily Water Separator (5 Marks)
- (b) Sketch and Describe Shipboard Incinerator (5 Marks)
- 18 (a) Explain ISM Code and SMS (5 Marks)
- (b) Explain Risk Assessment in ISM Code and steps for conducting it on-board (5 Marks)
- 19 Explain Salient Features of the following:
 - (a) Fire Drills (5 Marks)
 - (b) Enclosed Space Entry and Rescue Drills (5 Marks)

- 20 (a) Sketch and Describe Biological Sewage Treatment Plant used on-board (5 Marks)
(b) Define Hot Work with Examples and Explain "Hot Work Permit" (5 Marks)
- 21 (a) State the MARPOL requirements for pumping out Engine Room Bilges (Machinery Space of all Ships) (5 Marks)
(b) Describe pollution prevention measures for onboard Bunkering activity (5 Marks)
- 22 (a) What are the methods of Ballast Water Exchange (3 Marks)
(b) What are the criteria to be followed for handling Ballast Water (7 Marks)

T M

