

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

End Semester Examinations – December 2025

Programme Name: B Tech (ME)

Semester: 3

Subject Code: UG11T5306

Subject Name: MARINE ENVIRONMENT POLLUTION AND PROTECTION

Date: 18.12.2025

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. What is a Harmful Substance

- A. drugs
- B. alcohol
- C. paint
- D. any substance which can cause harm to marine resources and life at sea

2. What is discharge as per MARPOL

- A. act of leaving service
- B. exit
- C. effluents containing such substances which are harmful at sea
- D. outlet

3. Most harmful cargo (noxious liquid) carried in chemical tankers is under

- a. Z Category
- b. Y Category
- c. X Category
- d. Other Category

4. What is an incident as per MARPOL

- a) accident
- b) a news item
- c) event involving discharge into sea of harmful substance
- e) notifiable event

5. Fouling of a ship's hull can be prevented by

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- 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

6. Which of the following is NOT a requirement under MARPOL Annex III for the carriage of harmful substances in packaged form?

- a. Proper labelling and marking of packages according to the IMDG Code.
- b. Maintaining a manifest or stowage plan indicating the location of harmful substances.
- c. Immediate disposal of damaged harmful substance packages overboard in open seas.
- d. Compliance with packaging standards to prevent leakage during transport

7. What is the purpose of an Oil Record Book on a ship?

- a. To record oil spills only
- b. To record oil transfers, discharges, and sludge handling
- c. To track fuel consumption
- d. To maintain cargo loading details

8. MARPOL ANNEXE IV is related to a) scrap b)garbage c)Oil d)pollution by sewage

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. What does VOC stand for?

- a. Volatile Organic Chemicals
- b. Volatile Organic Compounds
- c. Variable Oxygen Concentration
- d. Vapours of Organic Chemicals

Section B

Five Questions of 02 Marks each

11. What is the Nox technical File

12. Define Special area as per MARPOL

13. What is the purpose of OPA-90?

14. State the purpose of Sewage Retention System (Holding Tank) and how sewage from Sewage Holding Tank to be discharged at sea.

15. What are the methods of Ballast Water Exchange?

Section C

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

16. a. Explain in detail Annex-III of MARPOL (5 marks)

b. What are the discharge Criteria in Annex II? (5 marks)

17. Describe the provisions for issuance of the IAPP Certificate (10 marks)

18. What is the OPRC HNS Protocol of 2000 in brief and what are its objectives in brief (10 marks)

19. What is required to be recorded in the Oil Record Book Part I and Part II (10marks)

20. a. Describe the provisions regarding the discharge of Sewage into the sea as per MARPOL Annex IV. (5 marks)

b. State the full form of SOPEP and explain its purpose (5 marks)

21.a. What are the criteria needs to be fulfilled for the discharge of Garbage from ships? (5 marks)

b. Explain in detail Volatile Organic Compound (VOC) Management Plan.

(5 marks)

22. a. Explain the regulations for Control of Harmful Anti-Fouling Systems on ships (5 marks)

b. Explain Ballast Water Management and their discharge criteria (5 marks)