

Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – December 2023
Programme Name: B Sc (NS)
Semester: VI
Subject Code: B Sc (NS) - UG21T4606
Subject Name: MARINE ENVIRONMENTAL PROTECTION

Date: 18.11.2023

Duration: 03 Hrs

Max Marks: 70

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

Choose the correct answer as applicable.

(1X10 Marks)

1. Accident of one of these ships led to MARPOL 73 convention
 - a) Grounding of M.T. Exxon Valdez
 - b) Grounding of M.T. Brear
 - c) Grounding of M.T. Torrey Canyon
 - d) None of the above

2. A tank specifically designated for the collection of tanks draining, tank washings and other oily mixtures-
 - a) Side tank
 - b) Holding tank
 - c) Wing tank
 - d) Slop Tank

3. The discharge of raw sewage into the sea can create -
 - a) a health hazards
 - b) lead to oxygen depletion
 - c) can be a visual pollution in coastal areas
 - d) All above

4. The disposal into the sea inside Special area, of dunnage, lining and packing materials which will float is-
 - a) not permitted
 - b) permitted 3 nautical miles from the nearest land
 - c) permitted 12 nautical miles from the nearest land
 - d) permitted 25 nautical miles from the nearest land



5. A Garbage Record Book shall be preserved for a period of-
- a) at least one year from the date of the last entry made in it
 - b) at least 2 years from the date of the last entry made in it
 - c) at least 3 years from the date of the last entry made in it
 - d) at least 5 years from the date of the last entry made in it
6. Which of the following is an air pollutant from ships-
- a) emission from machinery room
 - b) emission from ship board incinerator
 - c) emission of volatile organic compound
 - d) All above
7. Which of following areas are not ECA as per MARPOL Annex VI for NOx emission-
- a) Red sea
 - b) The North American area
 - c) Baltic sea
 - d) All the above
8. For the purpose of Annex III, "harmful substances" are those substances which are -
- a) Radio active
 - b) identified as marine pollutants in the IMDG Code
 - c) Corrosive and poisonous
 - d) All above
9. Noxious liquid substance (NLS) means -
- a) any substance indicated in pollution category column of chapter 17 or 18 of the IBC code
 - b) any substance indicated in pollution category column of IGC code
 - c) Substance listed in IMDG code
 - d) any poisonous Liquid Carried in Tanks of Chemical Tanker
10. Ballast pumped out from Segregated Ballast Tank of oil tanker must pass-
- a) through ODMCS
 - b) Through oil filtering equipment
 - c) None of the above
 - d) All above

SECTION B

Attempt all 5 questions.

(2X5 Marks)

11. Define category X of Noxious liquid substances.
12. What is Bunker Delivery Note (BDN)?



13. What are uses of Oil/water interface detector as required by MARPOL Annex- I?
14. Expand the following: -
- i. ODMCS
 - ii. NPDES
 - iii. SOPEP
 - iv. ODS
15. Define Garbage as per MARPOL.

SECTION C

Attempt any 5 out of 7 questions.

16. A) What is Particularly Sensitive Sea Area (PSSA)? List any 2 PSSA. (4 Marks)
B) Explain the harmful effects of marine pollution on living organisms. (6 Marks)
17. A) What are the criteria that an oil tanker should follow while discharging oily water mixture from slop tanks? (5 Marks)
B) What is Garbage Record Book? What record are maintained in it? (5 Marks)
18. A) What is Procedure and Arrangement (P&A) Manual, required on board NLS tankers? What is its purpose? (5 Marks)
B) Explain why it was necessary for IMO to develop guidelines for the development and implementation of ballast water management plans on board ships. (5 Marks)
19. A) What are the garbage that that can be discharged outside special areas as per Annex V of MARPOL? (5 Marks)
B) What are the requirements regarding the documentation of Harmful substances carried on ship in package form as per MARPOL? (5 Marks)
20. A) What is TBT and how does it affect marine environment? (5 Marks)
B) What are the precautionary measures that a ship can adopt to reduce garbage generated on board ship? (5 Marks)
21. A) List the items/equipment that are normally found in SOPEP locker of a Ship. (5 Marks)
B) What standards are required to be followed before discharge into the sea of residues of substances in category Y or Z as per Annex II? (5 Marks)
22. A) List the special areas for Annex I of MARPOL. (5 Marks)
B) What are the hazards associated with shipbreaking? (5 Marks)

-----XXXXX-----