

**INDIAN MARITIME UNIVERSITY**  
(A Central University Government of India)  
END SEMESTER EXAMINATIONS-June/July 2019  
**B.Sc Nautical Science**  
**Semester-VI**  
**Marine Environmental Protection**  
**(UG21T3606)**

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**Date: 05-07-2019**

**Maximum Marks: 70**

**Duration: 3 hrs.**

**Pass Marks: 35**

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Note: Attempt any seven questions.

1.
  - a. Write a brief history of the MARPOL Convention. (5 marks)
  - b. Enumerate the annexes of MARPOL and the dates they came into force. (5 Marks)
2. What is a SOPEP? What does it contain? (10 Marks)
3. What are the discharge standards for the discharge of residues of Noxious Liquid Substances? (10 Marks)
4.
  - a. What is considered as Sewage? (5 Marks)
  - b. What entries are required under annex V to be made in the Garbage Record Book? (5 Marks)
5. What is the criteria for ship-board garbage discharged at sea outside special areas? (10 Marks)
6.
  - a. Explain the D1 standard for Ballast Water Exchange. (5 Marks)
  - b. What is the aim of Anti-fouling system for ship convention? (5 Marks)
7.
  - a. What are the factors to be adhered when operating an Oily Water Separator? (5 Marks)
  - b. Describe the National Response System of the US Coast Guard. (5 Marks)

8.

- a. How are ships recycled in Developing Countries? (5 Marks)
- b. Enumerate the main operational discharges to be monitored under Vessel General Permit of the NPDES (5 Marks)

9. Fill in the blanks (10 Marks)

- a. **Tank** means an \_\_\_\_\_ which is formed by the permanent structure of a ship and which is designed for the carriage of liquid in bulk.
- b. **Slop tank** means a tank specifically designated for the collection of \_\_\_\_\_, \_\_\_\_\_ and other \_\_\_\_\_.
- c. **Special area** means a sea area where for recognized technical reasons in relation to its \_\_\_\_\_ and \_\_\_\_\_ condition and to the particular character of its \_\_\_\_\_ the adoption of special mandatory methods for the prevention of sea pollution by oil is required.
- d. **EMISSION** means any release of \_\_\_\_\_, subject to control, from ships into the \_\_\_\_\_.
- e. **OZONE DEPLETING SUBSTANCES** means controlled substances defined in the protocol named as \_\_\_\_\_ on Substances that Deplete the Ozone Layer. They include Halons and CFCs.

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