

**Indian Maritime University**  
**(A Central University, Govt of India)**  
**End Semester Examinations – June 2023**

**Programme Name: DNS**

**Semester: 2**

**Subject Code: UD11T5205**

**Subject Name: MARPOL & Marine Engineering Knowledge**

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|------------------|----------------|
| Date: 26.05.2023 | 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. The regulation number for MARPOL Annex 6 for the control of NOx is \_\_\_\_\_.  
(a) 12                      (b) 15                      (c) 14                      (d) 13
2. A non-positive displacement pump is a \_\_\_\_\_. (Reciprocating pump; Gear pump; Centrifugal pump; Screw pump)
3. A ship's oil record book is held on board for a minimum of \_\_\_\_\_ years from the date of last entry. (2, 5, 3, 4)
4. Ballast Water Exchange must be carried out at a distance of \_\_\_\_\_ from the nearest land. (12NM; 50NM, 200NM, 3NM)
5. The compressed air stored in bottles on a ship is at a pressure of \_\_\_\_\_.  
(a) 7bar                      (b) 12bar                      (c) 15bar                      (d) 30bar
6. VOC stands for \_\_\_\_\_.
7. UMS stands for \_\_\_\_\_.
8. MARPOL Annex \_\_\_\_\_ is meant for prevention of pollution by Garbage from ships.
9. Generator on ship's are having \_\_\_\_\_ stroke engine.
10. The full form of SMPEP \_\_\_\_\_.

Section B

**Five Questions of 02 Marks each**

11. What is the full form of SOPEP & PSSA?

12. State the difference between 2-stroke and 4-stroke diesel engines.
13. Short notes on Garbage Record Book.
14. What are the two main methods of producing freshwater from seawater used on board?
15. Define Sewage as per Annex IV of MARPOL.

### **Section C**

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

16. List the contents of a ship's SOPEP Locker.
17. AA -What are the four categorization of noxious liquid substances? (5m)  
BB - Briefly explain P and A Manual (Annex 2). What are the harmful effects of NO<sub>x</sub> in the atmosphere? (5m)
18. List the different types of steering gears fitted on ships. What is follow-up and non-follow up? Explain.
19. As per Annex 3 what are the requirements for the packaging, marking, and labelling of containers carrying the harmful substances?
20. (a) List the uses of steam on a cargo ship. (5m)  
(b) Sketch and Label a Water tube boiler. (5m)
21. Enumerate the sources of pollution by sewage from ships.
22. List the Dangers Associated With Hydraulic Systems.