

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

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_x 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.