

# Indian Maritime University

(A Central University, Govt. of India)

End Semester Examinations - May/June 2024  
Programme Name : Diploma in Nautical Science  
Semester : 2

Subject Code : UD11T5205

Subject Name : MARPOL & MARINE ENGINEERING KNOWLEDGE

Exam Date: 10-06-2024

Duration: 3 Hrs.

Max. Marks: 70

Pass Marks: 35

## General Instructions

1. All Sections (A, B & C) are to be attempted.
2. Options, if any, are specified in respective section.
3. Any other tables/charts to be used.

### SECTION A

Answer all the questions  
(10 x 1 = 10)

S.No	Question
1	Exhaust valve and fuel injectors are mounted on the _____ of the Main engine.
2	The regulation number for MARPOL Annex 6 for the control of NOx is _____. a) 12 b) 15 c) 14 d) 13
3	The youngest MARPOL Annex in terms of coming into force is Annex _____.
4	The rate of discharge of oil in liters per hour at any instant divided by the speed of the ship in knots at the same instant is known as _____.
5	The full form of SMPEP _____.
6	The compressed air stored in bottles on a ship is at a pressure of _____. a) 7bar b) 12bar c) 15bar d) 30bar
7	A non-positive displacement pump is a _____. a) Reciprocating pump b) Gear pump c) Centrifugal pump d) Screw pump



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8	Generator on ship's are having _____stroke engine.
9	A ship's oil record book is held on board for a minimum of ____ years from the date of last entry a) 2 b) 5 c) 3 d) 4
10	MARPOL Annex ____ is meant for prevention of pollution by Garbage from ships.

**SECTION B**  
**Answer all the questions**  
**(5 x 2 = 10)**

S.No	Question
11	Define Sewage.
12	Where is two-stroke engine used on ship and give the reason of use?
13	Describe why fusible plug is used.
14	What is the difference between SOPEP and SMPEP?
15	Short notes on Garbage Record Book.

**SECTION C**  
**Answer any 5 out of 7 questions**  
**(5 x 10 = 50)**

S.No	Question
16	(a). Explain Ballast water management plan. (5 marks) (b). Write the advantages and drawbacks of hydraulic system. (5 marks)
17	Sketch and Label a Water tube boiler.
18	List the different types of steering gears fitted on ships. What is follow-up and non-follow up? Explain
19	(a). State the requirements of 'Procedures and Arrangement Manual' as required under Marpol Annex-II. (5 marks) (b). Draw a neat-labeled diagram of a gate valve. (5 marks)
20	A) What are the four categorization of noxious liquid substances? (5 marks) B) Briefly explain P and A Manual (Annex 2). What are the harmful effects of NOx in the atmosphere? (5 marks)
21	(a). What are the sources of air pollution? (5 marks) (b). Draw a neat & labeled sketch of a 2-ram steering gear (5 marks)
22	List the contents of a ship's SOPEP Locker