

Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – December 2025
Programme Name: DIPLOMA IN NAUTICAL SCIENCE
Semester: 1
Subject Code: UD116105
Subject Name: CARGO WORK

Date: 11.12.2025

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.
- (iii) Non-programmable scientific calculator may be allowed.

MCQ's

(5x1 =5 Marks)

Q.No.	Question	A	B	C	D
1	Dirty dunnage may _____ the next cargo	Contaminate	Mixed with	Damage	Spoil
2	Cargoes other than container carried on deck are	Dangerous goods	Live stock	Large cargoes	All of these
3	Cargoes which liable to slide during loading should be loaded in --- -- Direction	Athwart ship	Below the deck	Fore & Aft	Center of the Deck
4	Any accident happed during handling of dangerous goods should be reported to - -----	Master	Cargo officer	Foreman	Chief Engineer
5	Capacity plan contains- -----	LSA locations	Hold/Tank capacities	Location of ECR	Location of Loadicator

- 6. Action to be taken in case of Accidents Involving Dangerous Goods are mentioned in Cargo Securing Manual (True/false)
- 7. Ships BALE CAPACITY is used for loading grain. (True/false)
- 8. Hatch covers should be securely fenced to a minimum height of 1 meter (True/false)

9. Deck cargo can obstruct the view of Navigation Bridge (True/false)

10. After washing holds Bilges should be clean and dry (True/false)

Section B

Answer all the questions

(5X2marks=10 marks)

11. Define how to determine the cargo runner needs replacing?
12. Write short notes on Gas Carrier
13. Define Flow Moisture point.
14. Describe the reasons for using dunnage
15. Define Grain capacity with sketch

Section C

16. The dimension of a compartment is 24m x 15m x 8 m with permissible Load Density of 5T/m². If 450 t of steel billets (SF 0.5m³/t) is to be loaded at the bottom & levelled, find how much quantity of cotton bales (SF 2.7 m³/t) can be loaded on top of first cargo? **(10 Marks)**
17. **(2 x 5 marks = 10 Marks)**
 - a. Define the following terms as used in the International Grain Code:
Grain, filled compartment and partly filled compartment
 - b. State the Entries to be made in Chain Register.
18. **(2 x 5 marks = 10 Marks)**
 - a. Describe the classification of dangerous goods in the international maritime dangerous goods (IMDG) code
 - b. Describe passenger ship operations, their comfort and safety?
19. **(2 x 5 marks = 10 Marks)**
 - a. Describe how to clean holds after discharge of a general cargo
 - b. Explain with suitable sketch Ship's Sweat and how to avoid it?
20. **(4+6 = 10 Marks)**
 - a. Write short note on OSV's.
 - b. A 5-tonne load is to be lifted by means of a gun tackle used to disadvantage. Find the approximate stress on the hauling part of the tackle, and the minimum size of wire you would use in the tackle and find out the Efficiency of a tackle. (wire is 6 x 24) (factor of safety is 6, Friction per sheave is 10%)