
Indian Maritime University
(A Central University, Govt of India)

Mar/Apr '26 SE

Programme Name: B Sc (NS)

Semester: III

Subject Code: UG21T6304

Subject Name: Cargo Work - I

Date: 07.03.2026

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. **10 X 1 = 10 Marks**

1. Which one of the following is not a primary purpose for using dunnage?
- To protect cargo from the effects of sweat
 - To provide ventilation
 - To provide cargo segregation
 - To prevent shifting of cargo
2. Chain Register onboard is maintained by _____
- Chief Engineer
 - Chief Officer
 - Second Officer
 - Second Engineer
3. Which is not an Advantage for Crane over Derricks?
- Simple Operation
 - Cranes are able to slew 360°
 - Cranes occupy less deck space of rigging
 - High installation cost
-

-
4. The safe working load must be clearly and legibly marked on every component of a lifting Cargo Gear. (True / False)
5. Shipper must not require to produce a certificate from a competent laboratory stating the FMP, TML, and MC of cargoes. (True / False)
6. If it is found that the dew point of the outside air is less than the temperature of the air inside the hold, then only should ventilation be carried out. (True / False)
7. The Acronym of IMGS stands for _____
- a. Indian Medical Guide for Ships
 - b. International Mythical Guide for Ships
 - c. International Medical Gratuity for Ships
 - d. International Medical Guide for Ships
8. The minimum size of a CSC Plate on container is _____
- a. 50mm x 100mm
 - b. 200mm x 50mm
 - c. 200mm x 100mm
 - d. 100mm x 100mm
9. Which is not a frozen cargo?
- a. Lamb
 - b. Egg
 - c. Butter
 - d. Meat
10. The Software used to check Ship's stability and the amount of cargo loaded is called _____
- a. Loadicator
 - b. Inclinator
 - c. Helm Indicator
 - d. Anemometer
-

Section B

TMI **Five Questions of 02 Marks each**

05 X 2 = 10 Marks

11. List any Four types of General Cargoes
12. Define Safe Working Load (SWL) of the cargo gear
13. Define Angle of Repose
14. State any four Container Lashing Materials
15. Define Stowage Factor

Section C

Five Questions of 10 Marks each. All are compulsory.

05 X 10 = 50 Marks

16. a. Outline the reasons for a general inspection of holds (5 marks)
b. Outline the lists of items to be inspected in the cargo hold before loading (5 Marks)
 17. a. A gun tackle rigged to advantage is used to lift a load of 3 tonnes.
 - i. Find out the effort and minimum size of polypropylene rope required.
 - ii. If the hauling part of this purchase was secured to the moving block of a watch tackle used to disadvantage, find out the effort required, efficiency of the system and minimum size of nylon rope required for the watch tackle. (Assume friction as 12% per sheave for both the purchases and use a factor of safety=6) (7 Marks)
 - b. If friction accounts for 12% of the load per sheave, find the minimum size of nylon rope that can be used in a watch tackle to lift a weight of 5.5 tonnes. (3 Marks)
 18. a. Describe the hazards associated with coal cargoes (5 Marks)
-

b. Describe the cleaning and preparation of holds and decks for the carriage of grain (5Marks)

19. Describe the classification of dangerous goods in the International Maritime Dangerous Goods (IMDG) Code (10 Marks)

20. M.V Indian Pride's Cargo Hold length 12.5m, breadth 9m and depth 6.3m. Find (10 Marks)

i. How many tonnes of bicycles (SF 3.10), beer cases (SF 1.95) and granite slabs (SF 0.48) will be able to load in the hold.

ii. If the broken stowage of bicycles(SF 3.10), beer cases(SF 1.95) and granite slabs(SF 0.48) are 14.5%, 7% and 11,2%, how many tonnes of each would be able to load in the hold.

iii. If the load density of the above hold was 8.5t/m^2 , to what height could you able to load the above cargoes taking into account the broken stowage.