

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
End Semester Examination Dec 2019/Jan 2020
B.Sc. (Nautical Science)
Semester -III
UG21T4305- Cargo Handling and Stowage Paper- I

Date: 18.12.2019

Max Marks: 70

Time: 3 Hours

Pass Marks: 35

Note: **Question No. 1 is compulsory.**

Answer any 6 questions from remaining 8 questions.

Each Question Carries 10 marks

Use of Non-programmable Scientific Calculator is permitted.

Q1. Write short notes on the following:

(5x2=10marks)

- a. General Cargo Ship
- b. Grain Capacity
- c. Bale Capacity
- d. Broken Stowage
- e. Cargo Sweat.

Q2. (a) Explain briefly the Bulk carrier, examples of bulk cargoes.

(5 marks)

(b) Draw the Simple sketch of a Derrick and mark its part.

(5 marks)

Q3. (a) Explain briefly ballasting and deballasting operations on board ship.

(5 marks)

(b) Write in detail the Duties of the Officer on Cargo Watch.

(5 marks)

Q4. (a) Explain all types of Fibre ropes used on board ship.

(5 marks)

(b) Explain with a simple sketch about "Block" and label its parts.

(5 marks)

Q5. (a) Explain in detail the Dunnage and its uses onboard.

(5 marks)

(b) Write short notes on Cargo Securing Manual.

(5 marks)

- Q6. (a) Explain briefly the types of Sweat on board ship. (5 marks)
- (b) Discuss in detail the types of Ventilation Carried out onboard ship. (5 marks)

Q7. How many tonnes of the following commodities will fit in a hold of dimensions 13x 10x 8.5 and bale capacity 1015m³ ?

Cargo	Stowage factor (m³/t)	Broken Stowage
a. Wheat	1.32	Nil
b .Fruit cases	1.98	4.5%
c. Bones in bulk	2.23	0.8%
d. Bagged Rice	1.63	6.0%
e. Scrap metal	0.67	1.2%

- Q8. (a) Explain in detail the Procedures to check weather tightness of hatch covers. (5 marks)
- (b) Write the importance of Inspection of cargo gear prior loading and unloading. (5 marks)
- Q.9. (a) Describe Cargo Stowage plans and discuss its importance. (5 marks)
- (b) Write short notes on importance of port rotation while planning cargo stowage. (5 marks)
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