

INDIAN MARITIME UNIVERSITY
(A Central University, Govt. of India)
May/June 2018 End Semester Examinations
DNS (Diploma in Nautical Science)

Semester I

CARGO HANDLING, STOWAGE AND SEAMANSHIP I (UD11T3106)

Date: 09.06.2018

Max. Marks: 70

Time: 2 Hrs

Pass Marks: 35

Answer Q .No. 1 and any three other Questions from Section A;

Answer any three Questions from Section B;

All Questions carry equal marks;

Use of Non-Programmable Scientific Calculator permitted.

Section A: CARGO HANDLING AND STOWAGE

(Answer Q No. 1 and any three other Questions from this Section)

Q1. The dimension of a compartment are 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)

Q2. Write Short notes on the following:

a. Oil Tanker

b. Bulk Carrier

c. Broken Stowage

d. Measurement Cargo

e. Load Density

(5 X 2 = 10 Marks)

Q3. a) Describe the basics of cargo planning and understanding of load distribution.

b) Enlist the procedures to prepare a cargo hold to receive a dry bulk cargo? (5x2 = 10 Marks)

Q4 a) Describe Strum Box in cargo hold with the aid of diagram.

b) Describe the need for proper securing of cargo and effective monitoring of the securing arrangement. (5x2 = 10 Marks)

Q5. a) Describe Ship sweat & Cargo Sweat?

b) What are the different Portable and fixed Fire control Measures available on a ship.

(5x2 = 10 Marks)

SECTION-B: SEAMANSHIP THEORY & SAFE WORKING PRACTICES

(Answer any 3 Questions from this Section)

O6. A weight of 15t is being lifted by a three-fold purchase rigged to advantage. What minimum size of 6 x 37 wire rope can be used for the purchase if friction per sheave is 8% of the weight? Find the efficiency of the system. (10 Marks)

Q7. (a) Enlist the care that needs to be taken of fibre ropes.

(b) With the help of suitable sketch, name the parts of a Block.

Explain the markings on a block.

(5x2 = 10 Marks)

Q8. (a) Describe major components of paints.

(b) What precautions are to be taken before entering cargo tank?

Write any ten.

(5x2 = 10 Marks)

Q9. (a) Explain Cathodic protection system?

(b) Write short notes on Safety committee ?

(5x2 = 10 Marks)
