

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
May-June 2018 End Semester Examinations
Diploma in Nautical Science (DNS)
Semester : I

Cargo Handling Stowage and Seamanship-I (UD11T1106)

Date: 09-06-2018
Time: 2 Hrs

Max.Marks: 70
Pass Marks: 28

Note:

- i. Answer 4 questions from Section I with question No.1 being compulsory.
- ii. Answer 3 questions from Section II with question No.6 being compulsory.
- iii. Non- programmable scientific calculator is permitted.

SECTION – I

1. How many tonnes of the following commodities will fit in a hold of dimensions 13x10x8.5 and bale capacity 1015m³ ?

Cargo	stowagefactor (m ³ / t)	Broken Stowage
a. Wheat	1.32	Nil
b. Fruit cases	1.98	4.5 %

(10 marks)

- 2) Describe the following terms

- (a) Grain capacity
- (b) Deadweight Cargo
- (c) Hogging
- (d) Sagging
- (e) Ballasting

5x2=10 Marks

3. List out various types of Merchant Ships. Give examples of the Cargoes they carry. (10 marks)
4. Explain Corrosion and corrosion prevention techniques on board merchant ships (10 Marks)
5. Describe various types of ropes used on board and care and maintenance of the same. (10 marks)

SECTION – II

Answer THREE questions only in this section.

Questions no.6 is compulsory. All questions carry 10 marks each.

6. A box shaped Vessel 20X6X4.5 floats in DW of RD 1.010 at a draft of 2.4m. Calculate the percentage reserve buoyancy in DW of RD 1.020.

(10 marks)

7. (a) Define Reserve Buoyancy and explain how it helps the ship during voyages.

(b) Explain how the draft of a vessel changes with change in dock water density

(2x5 =10 marks)

8.(a) Enlist safety precautions to be taken while berthing & un-berthing a vessel

(b) Enlist various codes and publications providing guidelines for safe cargo operations

(2x5 =10 marks)

9. Sketch and name the principal parts of Ship

(a) Peak Tanks

(b) Double bottom tanks.

(2x5 =10 marks)
