

INDIAN MARITIME UNIVERSITY
(A Central University Government of India)
END SEMESTER EXAMINATIONS – DECEMBER 2019
Diploma in Nautical Science

Semester I

UD11T3106- Cargo Handling, Stowage & Seamanship I

Date: 14.12.2019
Time: 2Hrs

Max. Marks: 70
Pass Marks: 35

PART– A

Note: Question no.1 is compulsory and Answer any **three** from the remaining Questions. All questions carry equal marks.

1. A hold of length 15 meter breadth 10.3 meters and depth 7.5 meters is to be loaded with granite slabs (stowage factor 0.48 m³/t and broken stowage 12.3%). If the load density of hold is 11.2 T/ Sq. m. How many tonnes of cargo can safely be stowed therein and to what height?
(10 Marks)
2. Explain briefly the following terms. (5x2=10 Marks)
 - a) Deadweight Cargo
 - b) WNA mark
 - c) Bale Capacity
 - d) Grain Capacity
 - e) Capacity plan
3. (a). Describe briefly Segregation and separation of cargoes. (2x5=10 Marks)
(b) Describe the basics of ballasting/ deballasting.
4. (a) List the various cargo handling gear on general cargo ships. (2x5=10 Marks)
(b) Describe shortly a cargo securing manual.
5. (a). Explain different types of ventilation. (2x5=10 Marks)
(b). Describe ways of prevention of ingress of water.

PART– B

Answer any 2 questions. All the questions carry equal marks

6. A weight of 8 tonnes is to be lifted using a twofold purchase to advantage. Find the effort required and the minimum size of polypropylene rope required. (Assume 10% friction per sheave). (10 Marks)
7. (a) Explain the care and maintenance of wire ropes. (5 Marks)
(b) Explain the markings on a shackle. (5 Marks)
8. (a) Explain Sacrificial anodes. (5 Marks)
(b) With reference to the safe working practices describe "Risk". (5 Marks)

PART-C

Answer any one of the following question

9. Describe surface preparation before application of paint. (10 Marks)
10. (a) What is a PPE? (2x5=10 Marks)
(b) What PPE is to be used while working aloft?
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