

Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – December 2022

Programme Name: DNS

Semester: I

Subject Code: UD11T5106

Subject Name: Cargo Handling, Stowage and Seamanship

Date: 30.12.2022

Max Marks: 70

Duration: 02 Hours

Pass Marks: 35

General Instructions

- (i) All Sections (A, B & C) are to be attempted.
- (ii) Options, if any, are specified in respective section.
- (iii) Scientific Calculator is permitted.
- (iv) (Norrie's Table, Nautical Almanac, Hind ship Hyd. Particulars, Weather coding booklet, Tide Tables, permitted as per the subject concerned)
- (v) (World Map, Tidal curve, Radar Plotting sheets, Charts, Illumination range curve chart will be supplied by the Examination Centre)

Section A

Fill in the Blanks

(1*10 = 10 Marks)

1. Dimensions of the containers carried on board vessel are _____
2. A stowage factor of around _____ is used as the basis for charging freight.
3. _____ is the strongest rope amongst natural fiber rope.
4. When ship goes from warm place to cold place then _____ is formed.
5. _____ can reduce over carriage of cargo.
6. Main components of paint are _____ & _____
7. _____ are 2 elements of Risk assessment.
8. The validity of Permit should not exceed _____ hrs.
9. Mandatory signs are identified by _____ colors.
10. The safety committee meetings should be held in _____ time

Section B

Short answer

(2 * 5 = 10 Marks)

11. Define Cargo Work
12. Broken Stowage
13. List types of safety signs used on board ship
14. List any 4 PPE
15. What is Breaking Stress and Safe Working Load?

Section C

Answer five out of seven questions.

16. **(10 Marks)**
The dimensions of a tween deck are 20m x 15m x 3m. Find the maximum Weight of general cargo that can be loaded in the compartment if Stowage Factor is 2.0 m³ /t and broken stowage is 10%. Will the quantity of cargo be different if load density of the deck is 1.25 t/m²? **Give reasons for your answer.**
17. **(10 Marks)**
A gyn tackle reeved to advantage is used to lift a load of 22 tonnes. Find the max. Size of 6 x 37 wire to be used in this tackle.
18. **(5x2=10 Marks)**
 - a) How is preparation of Bilges done prior to loading Cargo?
 - b) What is a Cargo Stowage plan and state its advantages?
19. **(5x2=10 Marks)**
 - a) What is Cargo Sweat? How is surface ventilation carried out by natural Ventilation methods?
 - b) What is a Fire Triangle? What are the basic methods of controlling Fire on a ship?
20. **(5 x 2=10 Marks)**
 - a) Explain safety precautions to be taken while operating power tools
 - b) Discuss the care and maintenance of a synthetic mooring rope.
21. **(5 x 2=10 Marks)**
 - a) What is meant by Risk assessment? List any four actions by which risk can be controlled
 - b) What is a Permit to Work? List any four conditions that need to be included in the permit to work.
22. **(5 x 2=10 Marks)**
 - a) Explain with sketch Electro-chemical corrosion and explain Sacrificial Anode.

b) As per the COSWP, what is the role of "Safety officer" on board?

*****end of paper*****

Tolani

