

**INDIAN MARITIME UNIVERSITY**

**Time Bound Assignment September/October 2020**

**B Sc (NS) Arrear Examinations**

**Specialised Cargo Handling and Stowage**

**UG21T3504**

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Date: 28/09/2020

Maximum Marks: 70

Time: 3 Hrs

Pass Marks: 35

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Note: Question No. 1 is compulsory.

Answer any 6 questions from remaining 8 questions (each of 10 marks).

Scientific Calculator is permitted if required.

Draw neat Sketches where mentioned in the question

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- Q1. Define **(2 x 5 = 10 marks)**
- (a) Chilled Cargoes
  - (b) Threshold Limit Value
  - (c) Crude Oil
  - (d) Category X Cargo in Chemical Tankers
  - (e) MARVS
- Q2. (a) What are Ro-Ro Ships? Explain the various types of Ro-Ro ships and the types of cargo they can carry? **(5 marks)**
- (b) What are Off Shore Supply Vessels and their functions? **(5 marks)**
- Q3. (a) Explain with a sketch atleast 5 different Types of Container? **(5 marks)**
- (b) Explain What is meant by CSC plate and what does it contain? **(5 marks)**
- Q4. (a) On a reefer Vessel explain the good practices taken during the loading of cargo? **(5 marks)**
- (b) What is Pre-Cooling? Explain same with the preparation of cargo spaces? **(5 marks)**
- Q5. (a) What is Crude Oil Washing(COW)? What are the hazards and benefits of same? **(5 marks)**
- (b) Explain the Loading Operations on a Oil Tanker? **(5 marks)**

- Q6. (a) Explain the Precautions to be taken while loading Heavy Lifts? **(5 marks)**  
(b) Explain the Procedures for cleaning and Preparation of deep tanks for Loading? **(5 marks)**
- Q.7. (a) Explain the purpose and use of IBC Code? **(5 marks)**  
(b) Explain in brief the what is Cargo Data Sheet and the information available in them for Chemical Tankers? **(5 marks)**
- Q8. (a) Explain the various hazards associated with gas cargo? **(5 marks)**  
(b) Explain various types of Gas Carriers? **(5 marks)**
- Q.9. A tank 10mx9mx9m is to be loaded with oil of RD 0.92 at 20<sup>0</sup>C. How many tones of oil should be loaded if an allowance of 3% of the tank volume is to be made for the expansion of the oil at the highest temperature of 28<sup>0</sup>C expected on the Voyage.  
Load Port Temperature is 15<sup>0</sup>C.  
What is the ratio of the free space to occupied space in the tank at the loading port.(Density Correction Factor is 0.0005/<sup>0</sup>C) **(10 marks)**
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