

**QP CODE :20327**

**Duration: 3 Hours**

**Max Marks: 100**

**Pass Marks: 60**

**Note:** Use of non-Programmable Scientific Calculator, ASTM Tables, Norie's/Burton's nautical tables is permitted. Graph Paper will be provided.

Question No. 1 and 2 are **COMPULSORY** and carry 20 marks each. Attempt any **SIX** questions of the remaining, which carry 10 marks each. If a question is sub-divided into parts, unless otherwise expressly provided against each part, all parts shall carry equal marks

**Q.1. A crude oil tanker is on her ballast voyage after unloading cargo. One of the cargo tank valve's requires maintenance and hence necessitates tank entry. Describe the procedure for man entry? After completion of work, explain how would you make the tank ready for loading?**

**Q.2. With respect to IMDG code explain:**

- a) MFAG
- b) EmS
- c) UN No and
- d) Segregation

**Q.3. With reference to Dock Labour Regulations, describe the following**

- i) Authorized person ii) Competent person iii) Responsible person

**Q.4. How will you prepare a cargo hold for loading coal cargo?**

**Q.5. Sketch and describe flammability diagram.. Explain the reason and procedure for Inerting and purging, of a cargo tank during cargo operations**

**Q.6. What factors should be considered prior loading deck cargo? List the equipment used for securing cars on deck.**

**Q.7. Explain the features of centrifugal and reciprocating pumps. Name typical applications of these pumps on board ship and state the precautions to be observed when using each type.**

**Q.8. a) Differentiate between frozen, chilled and air-cooled cargoes.  
b) Explain the procedures to be observed before, during and after loading a full cargo of bananas and precautions during the voyage.**

**Q.9. With the help of a diagram explain the functions of any one type of deck seal**

**Q.10. a) How will you prepare a refrigerated Compartment for Loading Chilled Meat?  
b) What precautions you will take prior to loading and during voyage in Reefer ships.**

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