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10MR71

**Seventh Semester B.E Degree Examination, Dec.2016/Jan.2017**  
**Advanced Marine Technology**

Time: 3 hrs.

Max. Marks:100

**Note:** Answer any FIVE full questions, selecting atleast TWO questions from each part.

**PART - A**

- 1 a. What are the checklist for before commencing the ship to Un-manned (UMS)? (10 Marks)  
b. What are the essential requirements for un-attended machinery space (UMS) ship? (10 Marks)
- 2 a. Explain with a neat sketch, working principle of cascade type reliquefaction of cargo in LNG ships. (14 Marks)  
b. Explain any two cargo tank gauging system. (06 Marks)
- 3 a. Explain Emergency shut down system (ESD) in detail. (10 Marks)  
b. Describe fully pressurized and fully refrigerated ships. (10 Marks)
- 4 a. Explain with neat sketch the location of cargo tanks on chemical tankers based on their types. (12 Marks)  
b. Explain Cargo venting system in chemical tankers and write the main factors to be considered in the sizing of tank venting system. (08 Marks)

**PART - B**

- 5 a. Explain the working principle of inert gas system in oil tanker with a neat labeled diagram. (10 Marks)  
b. Write a note on crude oil working process. (10 Marks)
- 6 a. Explain the importance of providing ventilation in a car carrier. (08 Marks)  
b. What are the variations of RO - RO ships and write the advantages of these ships? (12 Marks)
- 7 a. Explain the midship section construction of a double skinned bulk carrier, with a neat labeled sketch. (10 Marks)  
b. Explain hatch covers and its related parts in detail. (10 Marks)
- 8 a. Write a note on IAPP certificates and the regulations under this certificate. (10 Marks)  
b. Explain the working principle of Electronically controlled common rail injection system. (10 Marks)

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Important Note : 1 On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.