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10MR71

Seventh Semester B.E. Degree Examination, June/July 2017

**Advanced Marine Technology**

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting at least TWO questions from each part.**

**PART – A**

- 1 a. Name and explain all the essential bridge control systems used on board the ship. (15 Marks)  
b. What is dead man alarm? Explain its working principle. (05 Marks)
- 2 Explain the necessity of cargo conditioning and explain in detail the working principle of reliquafaction of cargo in LNG carrier. (20 Marks)
- 3 a. Explain Type A and type B independent tanks in detail. (12 Marks)  
b. Write a note on membrane tanks. (08 Marks)
- 4 a. Name and explain the purpose of types of cargo piping system in chemical tankers and draw the schematic line diagram of group main system. (16 Marks)  
b. Write a note on gauging system used in chemical tankers. (04 Marks)

**PART – B**

- 5 a. Explain 1G system on oil tanker with a neat labeled sketch and also list the alarm and trips on 1G system. (16 Marks)  
b. Write the classification of tankers on the basis of size. (04 Marks)
- 6 a. Explain in detail the problem concerning the stability of the ship and its safety. (10 Marks)  
b. Draw the midship section of ro-ro ships and also write the classification of ro-ro ships based on the variation of cargo carried. (10 Marks)
- 7 a. Write the aim, scope and guidelines for condition assessment program including inspection items and end reports. (12 Marks)  
b. Draw midspan section of bulk carrier. (08 Marks)
- 8 a. With a neat sketch, explain the working of electronically controlled common rail injection system. Also write the advantages. (14 Marks)  
b. List the methods used on board ship to reduce NO<sub>x</sub> and SO<sub>x</sub> emission. (06 Marks)

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Candidate's Name: \_\_\_\_\_ Roll No: \_\_\_\_\_