

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
End Semester Examinations December 2018
B. Tech (Marine Engineering)
Semester: VII
Advanced Marine Technology(UG11T2704)

Date: 03.01.2019
Time: 3 Hours

Maximum Marks: 100
Pass Marks: 50

PART – A

(All Questions are compulsory) Marks: 10 x 3 =30

1. (a)What are the safeties associated with Cargo pump room or compressor room in a Gas Carrier?
- (b)What is the difference between Product Tanker and Crude Oil Tanker?
- (c)Why bulkhead seal is required between Pump room and Engine room?
- (d)What is Ullage, in case of Tanker Operation?
- (e)With respect to Chemical tankers, write the important functions of Coatings in the cargo tanks.
- (f)Briefly explain the phenomenon of BLEVE.
- (g)Define Condition Assessment Scheme.
- (h)As per UMS requirements, what indications are provided on bridge related to M/E operation from bridge?
- (i) What is NO_x Technical file?
- (j) With regard to common rail system employing electronic fuel injection, mention the role of crank angle sensor.

Part – B Marks: 5 x 14 =70

(Answer **any 5** of the following 7 Questions)

2. a)Briefly explain requirements of UMS operation. (8)
- b)Explain the Cargo containment system of a liquefied gas carrier. (6)
3. a)With a simple sketch, explain a fixed gas detection systems in gas tankers. (7)
- b)With the help of a simple sketch illustrate the mountings on LNG tank dome. (7)

4. Draw and Explain a Cargo Pump used in Chemical Tankers. (14)
5. a) Explain the IG system from boiler flue gas on a Tanker with a neat sketch. (10)
b) Enumerate the safeties incorporated in the system. (4)
6. With the help of a neat sketch explain the Common Rail Fuel Injection System of a Slow Speed Marine Diesel Engine. (14)
7. a) Discuss ventilation arrangement on a RORO Cargo space. (7)
b) Explain briefly the constructional features of a bulk carrier with the help of a transverse cross-sectional sketch. (7)
8. a) Describe with sketch Prismatic self supporting independent Tank "A" suitable for a fully refrigerated LPG carrier. (8)
b) Enumerate the differences between MAN B&W engine and ME engine. (6)
