

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)

B.TECH. (Marine Engineering)

Semester – VIII – September 2015 Examinations

ADVANCED MARINE TECHNOLOGY

Subject Code: UG11T1804

Time: 3 Hours

Max Marks: 100

Date: 28.9.2015

Pass Marks: 50

SECTION – A

(3 X 10 = 30 Marks)

Compulsory Questions

- 1) Explain
 - (a) Explosion Proof Enclosure
 - (b) MARPOL Tankers
 - (c) Vapour Pressure & Temperature relationship
 - (d) NO_x Technical File
 - (e) BOG Compressor Parallel mode operation
 - (f) CAS Number
 - (g) IG Line Oxygen Analyser
 - (h) Stripping in Tanker Operation
 - (i) Lifiable Decks of PCC
 - (j) PV - Breaker

SECTION- B

(5 X 14 = 70 Marks)

Answer any five of the following eight questions

2. (a) Explain with neat sketches construction of different types of cargo tanks used on LNG Carrier
- (b) Justify selection of materials for the tank and insulation. (10 + 4 = 14 Marks)

3. (a) Discuss fixed piping arrangements in a LPG tank .

(b) Explain with simplified diagram Gas Freeing / Aerating of a LPG tank.

(6 + 8 = 14 Marks)

4. (a) Describe Oil Tanker types and classification .

(b) Explain with suitable sketches pump room arrangements with safety devices .

(c) What precautions should be taken before entering pump room ?

(4 + 6 + 4 = 14 Marks)

5. (a) What is the purpose of Scrubber in IG System ?

(b) Explain with sketches Scrubber construction - used in Boiler Flue Gas IG System .

(c) What are the advantages and disadvantages of VLCC ?

(3+ 7 + 4 = 14 Marks)

6. (a) In a LNG Carrier where Nitrogen Gas is used and why ?

(b) With neat diagram explain Membrane Type Nitrogen Generating System .

(4 + 10 = 14 Marks)

7. (a) What are the requirements for UMS operation ?

(b) For UMS Operation what Controls and Indication systems are associated in Bridge Control Desk ?

(8 + 6 = 14 Marks)

8. (a) Define a Bulk Carrier

(b) With neat sketch of mid ship section across cargo hold explain construction of a Bulk Carrier .

(c) Discuss latest Regulations regarding Additional Safety Measures for Bulk Carrier .

(2 + 6 + 6 = 14 Marks)

9. (a) Why some modern Marine Diesel Engines are called Intelligent Engine ?

(b) Explain Common Rail Fuel Injection w.r.t Electronic Fuel injection of a modern Slow Speed Marine Diesel Engine

(4 + 10 = 14 Marks)

