

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

December 2017 End Semester Examinations

B.Tech (Marine Engineering) VII/VIII Semester

Advanced Marine Technology (UG11T2704/UG11T1804)

Date: 11.12.2017

Maximum Marks: 100

Time: 3 Hrs.

Pass Marks: 50

Part – A (Compulsory Questions) (10 x 3 = 30 Marks)

1.

- (a) Expand following abbreviations:
ISGOTT, BLEVE, TLV, CAS, SIGGTO, LNG
- (b) What are Annex VI requirements for EC Areas?
- (c) Explain Gas freeing operation for fuel oil tank
- (d) Explain stability considerations of RO-RO vessel.
- (e) Discuss condition monitoring system on modern ships.
- (f) What are Requirements of Inert gas system on oil tanker?
- (g) What is an IAPP certificate?
- (h) Discuss hazards associated with various cargos carried on bulk carrier.
- (i) Explain water tight and gas tight doors on PCC
- (j) Charge Air Humidifier.

Part-B (5 x 14= 70 Marks)
Answer Any FIVE of the following

2. (a) Draw Transverse cross section of bulk carrier and explain the construction. (8 Marks)
(b) Justify Enhanced survey requirement for Bulk carriers. (6 Marks)

 3. (a) Sketch and describe how LPG boil off gas is re-liquidified and condensate returned to cargo tank. (8 Marks)
(b) Explain ESD system on gas carrier. (6 marks)

 4. (a) Differentiate between Oil tankers and Chemical tankers. (4 Marks)
(b) Explain with sketch various types of pumps used in Chemical tankers. (10 Marks)

 5. (a) What is "Loading on top" for oil tankers. (4 marks)
(b) What is MARPOL regulation for COW (4 Marks)
(c) Explain one method of crude oil washing (6 Marks)

 6. (a) Explain tank cleaning operation and safety precautions on chemical tanker. (6 Marks)
(b) What are different types of cargo loading/discharging Piping systems on Oil Tanker, Explain Free Flow piping system" (8 Marks)

 7. (a) What are the modern developments in Camless electronic diesel engines. (5 Marks)
(b) With the help of simple block (or flow) diagram, discuss main engine starting and reversing process from local and remote position (9 Marks)

 8. (a) Explain 2 methods of meeting NOx requirements of Exhaust gas emission from ships Diesel Engine (8 Marks)
(b) Discuss safety arrangements of Cargo Compressors and Electric motors on a Gas Carrier (6 Marks)
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