

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

Date: 28.9.2015

Max Marks: 100

Pass Marks: 50

Section - A

(3 x 10=30 Marks)

Compulsory Questions

- 1) Explain
- a) Mast Riser, PV Valve
 - b) TEU, CEU
 - c) Double Hull Tanker
 - d) IBC Code
 - e) Condition monitoring
 - f) ODMCS
 - g) COW
 - h) MARPOL TANKERS
 - i) Why glycol systems are used for cargo compressors of Gas Tanker?
 - j) What is CAS on a bulk carrier?

SECTION – B

(5 x 14=70 Marks)

Answer any five questions from the following

2. With reference to membrane tanks for the carriage of liquefied gas at very low temperatures:
- (a) Describe with a sketch one method of building up the insulation;
 - (b) State which alloy is used for the membrane and the reason;
 - (c) Explain why a secondary barrier is installed. (10+2+2= 14 Marks)
- 3.
- a) How is inert atmosphere in a cargo oil tank is maintained in an oil tanker.
 - b) Sketch and describe a scrubber of IG system with safety devices. (4+10= 14 Marks)
- 4.
- a) What are the requirements for UMS operation ?
 - b) Explain with block diagram for starting & reversing Main propulsion Engine from bridge ? (4+10= 14 Marks)
- 5.
- a) What are the latest safety requirements of a bulk carrier?
 - b) Sketch & Describe a mid section of a bulk carrier? (4+10= 14 Marks)
6. Explain the following :
- a) Intelligent engine.
 - b) Compare traditional cam shaft engines with cam less engines. (7+7= 14 Marks)

7. a) Explain the requirements for control of Exhaust emissions from a slow speed marine engine
b) Describe at least two methods of meeting the above requirements (6+4+4=14 Marks)
8. a) Classify different type of chemical tankers as per IBC code.
b) Explain with sketch N₂ generation by PSA system. (7+7= 14 Marks)