

INDIAN MARITIME UNIVERSITY

(A Central University, Govt.of India)

May/June 2015 End Semester Examinations
SEMESTER – VI, B.TECH (MARINE ENGINEERING)

MARINE AUXILIARY MACHINES - II (T 1604)

Date:17.06.2015

Time:-3 Hrs

Max.Marks:100

Pass Marks:50

PART – A (3 x10 = 30 Marks) (Compulsory Questions)

1. a) What are the features need to be controlled in an ideal air conditioning system?
- b) Use of secondary refrigerant and its advantage?
- c) What are the properties required for lubricant used in Domestic fridge system?
- d) What is cracking of mineral crude oil?
- e) What is CNG and its advantages as fuel.
- f) What is Elasto hydrodynamic lubrication?
- g) What are the factors to consider for selecting a lubricant for a system?
- h) How a vibration is expressed or quantified?
- i) What is reverberation of sound?
- j) What is Cryogenic technology and insulation used?

PART – B (5 x14 = 70 Marks) (Answer any five of the following)

2. What is vapour compressor? What are the safety features incorporated on such compressor and explain their purposes for safe operation of machine?
3. Draw and explain a lubricating oil system used in Domestic fridge system?
4. What are the different ways Diesel engine system lubricating oil can deteriorate? Explain their respective effects on running the engine.
5. What is torsional vibration in Diesel engine? What are the excitation forces that can generate the vibration? How this can affect the running engine? and how it is dampened?
6. What is Michell Thrust bearing? Sketch a thrust pad with its dimensions and explain its working procedure. How it's clearances are measured?.
7. Why Bunker fuel oil purification is required on board? Write down the steps needed to be taken on board to achieve good combustion result.
8. Write short notes on- a) Springing, b) Grease, c) Guide load, d) Point contact bearing.
