

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
End Semester Examination Dec 2019/Jan 2020
B.Tech (Marine Engineering)
Semester -V
UG11T1505-2505- Marine Auxiliary Machines-I

Date: 18.12.2019

Max Marks: 70

Time: 3 Hours

Pass Marks: 35

Part – A (compulsory)

Answer the following (10x2=20 Marks)

1. State the precautions to be taken during fuel oil Bunkering.
2. Why is a Relief Valve fitted on the discharge side of a Positive Displacement Pump?
3. Explain briefly the effect of cavitation in centrifugal pumps
4. What is the full form of SOPEP? Name at least five items that the SOPEP locker must have.
5. State the purpose of Gravity Disc in a centrifugal separator
6. Name FIVE Major Machinery placed in E/R bottom platform and its purposes
7. Name different types of filters used on board ships.
8. List the various stresses acting on Tail end shaft & Intermediate shaft.
9. What are the uses of compressed air on board a ship?
10. State Cleaning procedure of the Plate type Heat Exchanger?

Part – B

Answer any 5 out of 7 questions (5 x 10= 50 marks)

11. a) Describe the standard Color Codes of Pipe Lines of a Sea Going Vessel. (3 Marks)
b) Sketch and Describe Fresh water Hydrophore system of a Sea Going Vessel. (7 Marks)
12. a) Sketch & describe a fresh water generator using Main Engine jacket water as heating medium. (7 Marks)
b) Explain the concept of Reverse osmosis with the aid of sketch. (3 Marks)
13. Explain the working of a Gear pump with the help of a neat diagram. (10 marks)
14. a) Sketch and explain the working of a two stage reciprocating air compressor. (7 marks)
b) List the safety & trip Equipments fitted on the compressor. (3 marks)
15. a) Sketch and explain the working of a two stage Oily water separator. (7 Marks)
b) Explain the criteria for discharge of oil or oily mixture from machinery space as per MARPOL Annex I. (3Marks)
16. a) Explain the working of a rotary vane Electro-Hydraulic steering gear with the help of a neat diagram. (7 Marks)
b) What are the Classification Society requirements for shipboard Incinerator? (3Marks)
17. a) Sketch & Label an Oil Lubricated Stern Tube. (7 Marks)
b) What is the purpose of dry docking? (3 Marks)