

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

May/June 2018-END SEMESTER EXAMINATION

B. Tech (Marine Engineering)

Semester: I

Marine Auxiliary Machines I (UG11T2505)

Date: 11-07-2018

Time: 3 hrs

Maximum Marks: 100

Pass Marks : 50

PART – A

Marks: 10 x 3 =30

(All Questions are compulsory)

1.

- (a) State the precautions to be taken during Bunkering
- (b) Why is a Relief Valve fitted on the discharge side of a Positive Displacement Pump?
- (c) What is Rudder Drop Allowance?
- (d) Explain the MARPOL regulations for a Ship Board Incinerator
- (e) Explain the purpose of emergency bilge suction.
- (f) Explain briefly the effect of cavitation in centrifugal pumps
- (g) What is the full form of SOPEP? Name at least five items that the SOPEP locker must have
- (h) State the purpose of Gravity Disc in a centrifugal separator
- (i) Name Five Machineries placed in E/R bottom platform and its purposes
- (j) Name different types of filters used on board ships.

Part – B

Marks: 5 x 14 =70

(Answer any 5 of the following 7 Questions)

- 2. a) Explain a Reverse Osmosis Plant used to produce Fresh Water
(10 marks)
- b) Name the different methods by which Fresh Water can be generated on ships?
(4 marks)
- 3. a) Explain the working of a 2 Ram Electro Hydraulic Steering Gear System with a simple diagram
(10 marks)
- b) In case the telemotor system fails, how is the steering controlled from the steering gear compartment?
(4 marks)

4. a) Explain an Oil Lubricated Stern Tube with a simple diagram
(10 marks)
- b) Name the different types of Ship Stabilisers
(4 marks)
5. a) Draw & explain a Fuel Supply System for a Large Two Stroke Diesel Engine
(10 marks)
- b) Why L.O used in various equipments are tested regularly?
(4 marks)
6. a) Explain the working of a Centrifugal Pump with a simple diagram
(10 marks)
- b) List out the mountings on an Air Bottle
(4 marks)
7. With the help of a neat diagram explain the working of a reciprocating air compressor.
(14 marks)
8. a) Explain the working of an Oily Bilge Separator with a simple diagram
(10 marks)
- b) Explain the criteria for discharge of oil or oily mixture from machinery spaces as per MARPOL Annex I
(4 marks)