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Fifth Semester B.E. Degree Examination, July/August 2022 Marine Auxiliary Machines

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is the purpose/importance of understanding the engine Room layout in ships? (02 Marks)
b. Draw the layout of main of auxiliary machineries in engine room of a tanker ship (oil) (18 Marks)

OR

- 2 a. Sketch and explain fuel oil system of main of auxiliary engines. (10 Marks)
b. Sketch and explain "FIRE MAIN SYSTEM" of a cargo ship. (10 Marks)

Module-2

- 3 a. Sketch and explain Magnetic filter in detail. (10 Marks)
b. Sketch and explain Globe and SDNR Valve in detail. (10 Marks)

OR

- 4 a. Explain about "LIP SEALS" in detail with suitable diagrams. (10 Marks)
b. Sketch and explain Quick closing valve in detail. (10 Marks)

Module-3

- 5 a. Explain the comparison of centrifugal and positive displacement pump characteristics with respect to lubricating oil duties by/through a graphical representation. (10 Marks)
b. Explain simple pumping system with the help of neat sketches. (10 Marks)

OR

- 6 a. Sketch and explain construction, working/operation of a gear pump in detail. (10 Marks)
b. Sketch and explain construction, working/operation of centrifugal pump in detail. (10 Marks)

Module-4

- 7 a. Sketch and explain fresh water Hydrophore system onboard a ship in detail. (10 Marks)
b. Sketch and explain Reverse Osmosis in detail. (10 Marks)

OR

- 8 a. What are the types of Heat transfer and explain them in short. (08 Marks)
b. Sketch and explain principle, construction, working of a shell and tube type heat exchanger in detail. (12 Marks)

Module-5

- 9 a. Sketch and explain 2-Ram steering Gear system in detail. (10 Marks)
b. Sketch and explain principle, construction and operation of VANE type steering gear. (10 Marks)

OR

- 10 a. Sketch and explain construction, working Hele-shaw pump in detail. (10 Marks)
b. Sketch and explain Hunting Gear Mechanism in detail. (10 Marks)