

CBCS SCHEME

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18MR54

Fifth Semester B.E. Degree Examination, Jan./Feb. 2023

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. Explain the precautions and procedure of the fuel oil bunkering onboard a vessel. (10 Marks)
b. Explain with a neat sketch fuel oil system on board vessel. (10 Marks)

OR

- 2 a. With a neat sketch explain, steam condensate system. (10 Marks)
b. Explain steam hammering and water hammering in pipelines. (10 Marks)

Module-2

- 3 a. Draw a neat sketch of Gate valve and explain the maintenance of the same. (12 Marks)
b. With a neat sketch, explain magnetic filter. (08 Marks)

OR

- 4 a. With a neat sketch, explain Swing Check Valve. (10 Marks)
b. With a neat sketch, explain Globe Valve. (10 Marks)

Module-3

- 5 a. Explain the steps following during the overhaul of centrifugal pump. (10 Marks)
b. What is cavitation? List the methods to prevent cavitation. (06 Marks)
c. Why priming is needed for centrifugal pump? (04 Marks)

OR

- 6 a. Explain series and parallel operation of a centrifugal pump graphically. (10 Marks)
b. Differentiate between centrifugal pump and positive displacement pump. (06 Marks)
c. Write a short note on gear pump. (04 Marks)

Module-4

- 7 a. With a neat sketch, explain Shell and Tube Heat Exchanger. (10 Marks)
b. Explain reverse osmosis desalination plant. (10 Marks)

OR

- 8 a. Explain the working of flash evaporators. (10 Marks)
b. Write a note on different types of fouling (10 Marks)

Module-5

- 9 a. Sketch and explain four ram type steering gear system. (14 Marks)
b. Write the SOLAS regulations for steering gear system. (06 Marks)

OR

- 10 a. Explain the principle, construction and operation of rotary vane steering gear system with a neat sketch. (14 Marks)
b. List the safeties provided in steering gear system. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.