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## Seventh Semester B.E./B.Tech Degree Examination, Dec.2024/Jan.2025 Marine Auxiliary Machinery and Systems

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Sketch a globe valve and explain. (10 Marks)
- b. Write a short note on various types of filter and strainers on ship. (10 Marks)

**OR**

- 2 a. Sketch a bilge system line diagram and explain about it in detail. (10 Marks)
- b. Sketch a cross-sectional diagram of SDNR valve. (10 Marks)

### Module-2

- 3 a. Explain construction, working of a gear pump used onboard a ship. (10 Marks)
- b. Explain construction working of FWG with the help of a suitable sketch. (10 Marks)

**OR**

- 4 a. Draw a basic refrigeration cycle and explain it. (10 Marks)
- b. What is the working principle of a screw pump? Explain construction working of the same. (10 Marks)

### Module-3

- 5 What are the types of heat exchangers available on board a vessel? Explain about them in detail. (20 Marks)

**OR**

- 6 a. Explain in detail about 4-ram steering gear system. (10 Marks)
- b. Explain in detail about hunting gear mechanism. (10 Marks)

### Module-4

- 7 a. What are the applications of steam? (05 Marks)
- b. What are the types of boilers available on board? Explain in detail. (15 Marks)

**OR**

- 8 a. What are the different types of burners in boiler? Explain any one type in detail. (10 Marks)
- b. Explain any 5 boiler mountings in detail. (10 Marks)

### Module-5

- 9 a. Explain in detail about construction and working of derricks and cranes. (10 Marks)
- b. Write short notes on life boats and life rafts. (10 Marks)

**OR**

- 10 a. Write short notes on bilge pumping arrangement on decks and cargo holds. (10 Marks)
- b. Explain construction and working of mooring winches in detail. (10 Marks)

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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.