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## Seventh Semester B.E. Degree Examination, Feb./Mar. 2022

### Advanced 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 MARPOL? Explain. (06 Marks)
- b. Explain the working of oily water separator with a neat sketch. (14 Marks)

**OR**

- 2 a. Explain about the maintenance of Incinerator. (06 Marks)
- b. Explain the working of Marine Sewage Treatment with a neat sketch. (14 Marks)

#### Module-2

- 3 a. What are the uses of compressed air on board ship? (04 Marks)
- b. Define Multistage compressor. Why multistaging is done in marine Air compression? (06 Marks)
- c. Draw a neat sketch of mooring winch. (10 Marks)

**OR**

- 4 a. With a neat sketch, explain the working of Fuel Oil Purifier. (14 Marks)
- b. Differentiate between Purifier and Clarifier. (06 Marks)

#### Module-3

- 5 a. Explain the process of charging the refrigerant in marine refrigeration system. (08 Marks)
- b. List the desirable properties of refrigerant and lubrication oil used in refrigeration compressor. (12 Marks)

**OR**

- 6 a. Trouble shoot the presence of air in the refrigeration system and mention the indications. (10 Marks)
- b. Explain the principle of refrigeration, with a simple refrigeration circuit. (10 Marks)

#### Module-4

- 7 a. What are the functions and properties of lubricating oil on ships? (12 Marks)
- b. Explain the three types of lubrications. (08 Marks)

**OR**

- 8 a. List the classification of fuels. (06 Marks)
- b. Explain the factors affecting combustion. (14 Marks)

#### Module-5

- 9 a. What is vibration? Explain the types of vibration? (08 Marks)
- b. What are the different types of maintenance on ships? Explain. (09 Marks)
- c. What is meant by critical speed? (03 Marks)

**OR**

- 10 a. Name the checks done during underwater hull inspection. (10 Marks)
- b. Write the noise level limits in work space, navigation space, accommodation space. (10 Marks)