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18MR72

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)

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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.