

Reg. No.

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B.E / B.TECH. DEGREE EXAMINATION, MAY 2023

Eighth Semester

MR18803 –SAFETY PRECAUTIONS AND WATCH KEEPING*(Marine Engineering)**(Regulation 2018)***TIME: 3 HOURS****MAX. MARKS: 100**

- CO 1** To impart knowledge to the students in Watch-keeping of Engine Room in various types of ships and to prepare for Class IV MoT Examinations.
- CO 2** To enable students to understand symptoms and to take correct remedial measures in Auxiliary machinery.
- CO 3** To enable students to understand symptoms and to take correct remedial measures in main engine.
- CO 4** To impart knowledge to the students about the correct maintenance procedure of engine components
- CO 5** To impart knowledge about the troubleshooting procedure and maintenance of electrical machineries.

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1	How many watch an engine personnel need to keep normally in a day?	1	2
2	State any two bad weather precautions.	1	2
3	What inspection is normally carried out in dry dock on a propeller?	2	2
4	Why vacuum is required in a fresh water generator?	2	3
5	List any two reasons for engine not turning on air.	3	3
6	What are causes for surging of turbocharger?	3	3
7	What is the difference between tolerance and clearance?	4	2
8	What is meant by 'running gear inspection'?	4	2
9	Why Carbon tetra chloride is not to be used for electrical components cleaning?	5	2
10	Mention any two important checks carried out on motors.	5	2

PART- B (5 x 14 = 70 Marks)

		Marks	CO	RBT LEVEL
11(a)	Explain the procedure for change over from Diesel oil to HFO.	(14)	1	3

(OR)

- | | | | | |
|--------------|---|-------------|----------|----------|
| 11(b) | Explain the emergency measures in the following cases. | (7) | 1 | 3 |
| | (a) Black out | | | |
| | (b) Rescue operation of injured person. | (7) | 1 | 3 |
| 12(a) | The performance of an air conditioning compressor is found falling. Trace the causes and suggest remedial measures. | (14) | 2 | 3 |
| | (OR) | | | |
| 12(b) | A running purifier found suddenly vibrating heavily. Explain the possible causes and checks for rectifying the fault. | (14) | 2 | 3 |
| 13(a) | Explain the causes and measures that can be taken to avoid the following. | (7) | 3 | 3 |
| | (a) Engine exhaust uptake fire | | | |
| | (b) Boiler exhaust uptake fire | (7) | 3 | 3 |
| | (OR) | | | |
| 13(b) | Discuss the need and effect of the following. | | | |
| | (a) Advanced fuel injection | (7) | 3 | 3 |
| | (b) Late fuel injection | (7) | 3 | 3 |
| 14(a) | Explain how a large two stroke marine diesel engine main bearings are opened up for inspection and what checks are carried out? | (14) | 4 | 2 |
| | (OR) | | | |
| 14(b) | Explain the procedure for taking out a large two stroke engine piston. State the checks that are carried out. | (14) | 4 | 2 |
| 15(a) | State the maintenance carried out on electrical switch board and state clearly the precautions to be taken. | (14) | 5 | 2 |
| | (OR) | | | |
| 15(b) | An inductor motor has been received from workshop after overhaul. State the checks carried out on this motor before putting into use. | (14) | 5 | 2 |

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

- | | | Marks | CO | RBT
LEVEL |
|-----------|---|--------------|-----------|----------------------|
| 16 | “The 4-stroke auxiliary engine bottom end bolts are prone to failure after particular running hours depending on the design.”
Justify your agreement on disagreement with the above statement with valid reasons and analysis. | (10) | 3 | 4 |
