

# CBCS SCHEME

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18MR63

## Sixth Semester B.E. Degree Examination, June/July 2023 Marine Electrical Technology

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. What are the precautions you should take as a officer on watch to prevent electric shock and working o electrical equipment in the engine room. (10 Marks)  
b. Explain Type 'A', 'B', 'C', 'D' tankers and their hazardous zones. (10 Marks)

OR

- 2 a. What is CPR? Explain. (03 Marks)  
b. Draw and explain a typical electrical distribution system on a ship. (17 Marks)

### Module-2

- 3 a. Explain isolated and earth neutral systems with a neat diagram. (10 Marks)  
b. With the help of a neat diagram explain high voltage earthing systems. (10 Marks)

OR

- 4 a. With the help of a block diagram explain a self excited AVR controlled generator. (10 Marks)  
b. Explain the advantages and disadvantages of miniature circuit breakers. (10 Marks)

### Module-3

- 5 a. Explain the various classes of in solution for electrical equipment. (10 Marks)  
b. Explain the grand cable preparation for use in hazardous zones. (10 Marks)

OR

- 6 a. Explain the working of a rise in temperature heat detector with the help of a diagram. (10 Marks)  
b. Draw and explain an incandescent lamp and its working. (10 Marks)

### Module-4

- 7 a. What is electric propulsion? What are the design problems a diesel electric propulsion system overcome as compared to traditional systems. (10 Marks)  
b. Draw and explain a basic turbo electric propulsion system. (10 Marks)

OR

- 8 a. Draw and explain a podded type (SSP) propulsion system. (10 Marks)  
b. What are booster drives? What are their advantages? (10 Marks)

### Module-5

- 9 a. Explain the main features of a maintenance free lead acid battery. (10 Marks)  
b. Explain the three main characteristics of a lead – acid cell. (10 Marks)

OR

- 10 What are the do's and don't's while working with batteries. (20 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.