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10MR64

**Sixth Semester B.E. Degree Examination, Dec.2017/Jan.2018**  
**Marine Electrical Technology**

Time: 3 hrs.

Max. Marks:100

**Note:** Answer any **FIVE** full questions, selecting atleast **TWO** questions from each part.

**PART - A**

- 1 a. With Construction and Operational diagram, explain brushless generator in ship. (10 Marks)  
b. Write the rules and regulations governing electrical machineries on ship. (10 Marks)
- 2 a. Explain the classification of batteries. Discuss any one emergency battery used in ship. (10 Marks)  
b. What are the different emergency loads? Classify depending on the period of use, while supplying from emergency generator. (10 Marks)
- 3 a. With neat diagram, explain different distribution system used in the ship. (10 Marks)  
b. With the circuit, explain Grounded and Insulated (Earthed and Isolated) neutral systems in detail. (10 Marks)
- 4 a. What are the different protective devices used for marine electrical motor protection? Explain briefly. (10 Marks)  
b. With the help of neat circuit diagram, explain Star – delta starter used in electrical motor. (10 Marks)

**PART - B**

- 5 a. What is the need of alarm system in ship? List and explain different alarm system in ship. (10 Marks)  
b. With circuit, explain in detail about Oxygen Analyzer used in on board ship. (10 Marks)
- 6 a. Explain in detail the different steps involved in Fault finding (10 Marks)  
b. Explain different testing equipment used for maintenance of Electrical system in ship. (10 Marks)
- 7 a. Explain in detail about different tanker classification and their dangerous spacer. (10 Marks)  
b. Explain in detail about the followings : (10 Marks)  
i) Flame proof (Ex'd) equipment      ii) Increased safety (Ex'e) equipment  
iii) Intrinsic safety (Ex'i)              iv) Non-Sparking (Explain 'n' or 'N') equipment.
- 8 a. Explain the need of Fire Fighting Equipment in Ship's Engine Room and discuss the different fire fighting system in ship. (10 Marks)  
b. List out the different switch gears and equipments and discuss the importance of the same in ship. (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 overwriting of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.