B.Tech Degree VI Semester Examination in Marine Engineering July 2010

MRE 602 MARINE ELECTRICAL TECHNOLOGY

Time : 3 Hours Maximum Marks : 100

I.	(a)	Explain the rules and regulations governing electrical machineries on ships.	(10)
	(b)	Explain the different alternator excitation methods.	(10)
		OR	
II.	(a)	What are the requirements of emergency generators and emergency batteries on board the ship.	(10)
	(b)	Sketch a typical emergency switch board arrangement indicating the different loads.	(10)
III.	(a)	Explain different types of AC distribution in a ship.	(10)
	(b)	Enumerate advantages and disadvantages of insulated and earthed neutral system.	(10)
		OR	
IV.	(a)	Explain different types of enclosures for motors.	(10)
	(b)	Explain the working of a single phase induction motor.	(10)
V.	(a)	State the requirements and regulations of navigation lights on board the ship	(10)
	(b)	Explain control of winches/windlass on board a ship with a circuit diagram.	(10)
		OR	
VI.		Write short notes on :- (i) Engine order telegraph (ii) Water tight door operation (iii) Salinometer	(20)
VII.	(a)	Explain different types of faults that may occur in a distribution system.	(10)
	(b)	How an earth fault in a deck light fitting is detected and rectified?	(10)
		OR	
VIII.	(a)	Explain different methods to reduce fire hazards on board a ship.	(10)
	(b)	Enumerate different survey requirements on board electrical installation.	(10)
IX.	(a)	Describe a typical diesel electric operation system indicating advantages.	(10)
	(b)	Explain a typical all electric steering gear, specifying the regulation requirements.	(10)
		OR	
X.	(a)	Identify the hazardous areas on a ship and describe the type of equipment installed in each location.	(10)
	(b)	Describe the maintenance carried out on explosion protected equipments.	(10)

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