Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-Vth Examination December 2010

Subject code: 151801

Subject Name: Marine Auxiliary Machines-I

Date: 13 /12 /2010 **Time: 03.00 pm - 05.30 pm**

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	State the basic objectives of propulsion shafting system.	**03**
	(b)	Explain in detail oil lubricated stern tube bearing.	**07**
	(c)	What is the importance of shaft alignment? Discus hydraulic jack method for shaft alignment.	**04**
Q.2	**(a)**	Classify various types of pumps used in ships. Stating application of each of them in ship.	**07**
	(b)	Explain the working of Rotary liquid-piston type pump.	**07**
		OR	
	(b)	Explain the working of reciprocating pump in detail.	**07**
Q.3	**(a)**	Enlist various types of deck machinery used in ship. Stating application of each of them. Also state the operation and maintenance of each of them.	**07**
	(b)	What is the importance of cooling main auxiliary engine? How sea water is used for cooling main auxiliary engine in ship? Explain in detail.	**07**
		OR	
Q.3	**(a)**	Explain in detail Engine Room layout for different types of ships.	**07**
	(b)	Draw the piping arrangement for steam and oil fuel system.	**07**
Q.4	**(a)**	What is the function of Evaporator? Enlist various types of Evaporators used in ship. Explain working of fresh water generator.	**07**
	(b)	Explain in detail marine filters.	**07**
		OR	
Q.4	**(a)**	What is the function of heat exchanger? Explain in detail working of single-pass (Fixed tube sheet) heat exchanger.	**07**
	(b)	State the reasons for corrosion in heat exchanger. Explain corrosion control techniques in heat exchanger.	**07**
Q.5	**(a)**	Explain in brief hudrophore tanks.	**07**
	(b)	What is bilge? What is ballast? Explain in detail arrangement for bilge ballast in ship.	**07**
		OR	
Q.5	**(a)**	Explain the working of deck cranes.	**07**
	(b)	Explain in detail care and maintenance of centrifugal pump and screw pumps.	**07**

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