

GUJARAT TECHNOLOGICAL UNIVERSITY

Marine Engineering B. E. SEMESTER: VI

Subject Name: **Marine Auxiliary Machines-II**

Subject Code: **161801**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
3	0	0	3	70	30	50

Sr. No	Course Content	Total Hrs.
1.	Oil Purification: Theory of oil Purification, Principles of operation and construction of different Centrifuges for heavy fuel and lubricating oil.	06
2.	Blowers and Compressors: Operational and Constructional details of blowers and Compressors used on board ships. Uses of compressed air.	10
3.	Steering gears: Operation and Constructional details of various types of steering machinery. Telemotor systems, transmitters and receivers Variable Delivery Pumps used in steering gears, axial and radial displacement types. Hunting action of Steering gear. Emergency Steering arrangement. Care and Maintenance of Steering Gear Plants. Shafting: Methods of shaft alignment, constructional details and working of Thrust blocks. Intermediate shaft bearing and Stern tube bearing. Oil water lubricated stern Tubes. Sealing Glands. Stresses in Tail End, Intermediate and Thrust Shafts.	19
4.	Dry Docking: Methods of dry docking of ships. Inspection and routine overhauling of underwater fittings and hull. Measurement of clearances and drop. Removal and fitting of propellers.	06

5.	Other Ship Board Equipments: Incinerators, Sewage Treatment Plant, Engine room crane, chain blocks, tackles, Anchor chain, its testing and survey requirements.	06
6.	Different types of ship stabilizer. Bow Thrusters, Hull protection arrangements.	04

Reference Books:

1. Marine Auxiliary Machinery, Seventh Edition; by H.D.McGeorge; Butterworth-Heinemann
2. The Maritime Engineering Reference Book: A Guide to Ship Design, Construction and Operation Anthony F. Molland
3. Marine Auxiliary Machinery and Systems; M Khetagurov; University Press of the Pacific
4. The Design of Marine Engines and Auxiliaries; by Edward Milton Bragg; Nabu Press
5. Marine Engine Design, Including the Design of Turning and Reversing Engines; Edward M Bragg; BiblioLife
6. Auxiliary Systems; William E Forsthoffer; Elsevier Science & Technology