

***B. Tech Degree IV Semester Examination in  
Marine Engineering, June 2009***

**MRE 405 MARINE AUXILIARY MACHINERY – I**

Time : 3 Hours

Maximum Marks : 100

- I. Draw a line Diagram for Main Engine fresh water cooling system showing important fittings. (20)
- OR**
- II. Explain the preparation and procedure of HFO Bankering. (20)
- III. Describe the working of 2 – stage reciprocating air compressor used on board ship, with the aid of a line sketch. (20)
- OR**
- IV. Describe the process of Fresh water generation in a ship. What are the methods of distillate treatment? (20)
- V. Sketch a Bilge oil Separator used on board ship. Explain the function of its mountings. (20)
- OR**
- VI. What is MARPOL Convention? Write notes on various annexes. (20)
- VII. Explain two different types of Heat exchangers used in ships. Enumerate the comparisons between each other. (20)
- OR**
- VIII. Write notes on :
- (i) Electrically operated Deck Crane (5)
  - (ii) Windlass and Mooring winch (5)
  - (iii) Duplex filters (5)
  - (iv) High and Low sea chests (5)
- IX. Explain the theory of oil purification. Describe working of Heavy Fuel oil purifier. (20)
- OR**
- X. Make a comparative study on centrifugal pump and gear pump with particular reference to its applications and maintenance. (20)