

***B.Tech Degree IV Semester Examination in Marine Engineering
May 2012***

MRE 405 MARINE AUXILIARY MACHINERY I

Time : 3 Hours

Maximum Marks : 100

(5 x 20 = 100)

I. With the help of line diagram explain the system of fresh water cooling of Main Engine of a ship with particular reference to pre-heating.

OR

II. Explain the preparation, procedure and precautions taken for heavy fuel oil bunkering in a ship.

III. Describe the working of three-stage reciprocating air compressor used on board ship, with the help of a sketch. What is the purpose of inter cooler and after cooler?

OR

IV. Sketch any flash type fresh water generator used on board. Describe its functioning. What are the methods of distillate treatment?

V. Write short notes on:

- (i) MARPOL Convention
- (ii) Duplex filters
- (iii) High sea chest
- (iv) Oil level monitor.

OR

VI. Sketch a bilge oil separator with mountings. Describe its function and maintenance.

VII. Describe plate type and tube type heat exchangers commonly used for marine applications. Compare its merits and demerits.

OR

VIII. Write notes on:

- (i) Windlass and Mooring winch
- (ii) Hydraulic Deck Crane
- (iii) Method of Condenser Tube Plugging
- (iv) Corrosion protection of steam condenser

IX. Describe with the help of a sketch the functioning of fuel oil clarifier.

OR

X. Describe the starting procedure of a centrifugal pump and gear pump. What are the precautions and checks to be taken before starting? Explain normal maintenance methods of these pumps.