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***B.Tech. Degree V Semester Examination in Marine Engineering
December 2014***

MRE 505 MARINE AUXILIARY MACHINERY - II

Time : 3 Hours

Maximum Marks : 100

(5 x 20 = 100)

- I. (a) Sketch and describe working of 4-4 am steering gear in a ship. (12)
(b) Describe the function of hunting gear. (8)

OR

- II. (a) Sketch and describe thrust block of main propulsion engine. (12)
(b) Discuss briefly on intermediate shaft bearing. (8)

- III. (a) Enumerate the procedure of dry-docking of a vessel with particular reference to the inspections to be carried out. (12)
(b) Sketch a keyless propeller and describe its fitting method. (8)

OR

- IV. Write short notes on :
(i) incinerators (5)
(ii) sewage treatment plant (5)
(iii) bow thrusters (5)
(iv) oil mist detector (5)

- V. What are the causes of vibration developed in machinery? Which are the various modes of vibration in a ship? (20)

OR

- VI. Write short notes on :
(i) critical speed (5)
(ii) anti vibration mountings (5)
(iii) de-tuners (5)
(iv) torsional vibration dampers (5)

- VII. What are the various sources of fuel? Describe the method of treatment of oil fuel before use in engine. (20)

OR

- VIII. What is the difference between residual fuel and emulsified fuel? Discuss the merit and demerits of such fuels in marine diesel engine performance. (20)

- IX. Describe theory of lubrication. Discuss the method of lubricating oil treatment and describe the effects of lubricating oil additives. (20)

OR

- X. Sketch and describe main engine main bearing lubricating method. Write briefly on lubricating oil analysis. What is the criteria for replacing lubricating oil already in use in marine engine/generators. (20)