

***B.Tech. Degree V Semester Examination in
Marine Engineering December 2013***

MRE 505 MARINE AUXILIARY MACHINERY-II

Time : 3 Hours

Maximum Marks : 100

- I. (a) Sketch and describe working of 4-4am 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:
(a) Incinerators (5)
(b) Sewage treatment plant (5)
(c) Bow thrusters (5)
(d) Oil mist detector (5)
- V. What are the causes of vibration developed in a machinery? Which are the various modes of vibration in a ship? (20)
- OR**
- VI. Write short notes on:
(a) Critical speed (5)
(b) Anti vibration mountings (5)
(c) De-Tuners (5)
(d) 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 fuels? 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)