



BT MRE - V - 09 - 15

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

MRE 505 MARINE AUXILIARY MACHINERY - II

Time : 3 Hours

Maximum Marks : 100

- I. (a) Sketch and describe the operation of a 4 – ram steering gear. (12)
(b) What is hunting action of steering gear? How it is controlled? (8)
- OR**
- II. (a) Draw the sketch of a thrust block and describe how the thrust is taken up by thrust block, while ship in moving Ahead and Astern. (12)
(b) Describe any type of Stern tube bearing. (8)
- III. (a) Explain the preparations and procedure of dry docking of a Vessel. (12)
(b) Enumerate routine and mandatory inspections and maintenance carried out in dry dock. (8)
- OR**
- IV. Write notes on :
(i) Lifting tackles inspection and survey (5)
(ii) Ships stabilizer (5)
(iii) Bow thrusters (5)
(iv) Hull protection arrangements in ships (5)
- V. (a) Explain various modes of vibration in a ship. (10)
(b) What is meant by Critical speed and what are the effects of critical speed in Engine performance? (10)
- OR**
- VI. Write notes on following with reference to marine diesel engine :
(i) Ant vibration Mountings (5)
(ii) De – turners (5)
(iii) Torsional vibration dampers (5)
(iv) Noise level measurements and Noise suppression methods (5)
- VII. (a) Describe in detail the crude oil refining process. (12)
(b) Describe the merits and demerits of residual fuel and emulsified fuel on engine performance. (8)
- OR**
- VIII. (a) Explain the methods of fuel analysis and fuel treatment carried out in ships. (12)
(b) Explain the classification of fuels. (8)
- IX. (a) Explain the theory of lubrication and properties of lubricant. (10)
(b) Describe the methods of lubricating oil analysis and treatment carried out. (10)
- OR**
- X. Write notes on :
(i) Loading pattern of diesel engine bearings (5)
(ii) L.O. additives used and its properties (5)
(iii) Solid and fluid lubricants (5)
(iv) Criteria for selection of lubricants. (5)