



B. Tech Degree IV Semester (Supplementary) Examination
in Marine Engineering, July 2008

MRE 407 SHIP TECHNOLOGY

Time : 3 Hours

Maximum Marks : 100

- I. Define with sketches the following ship terms:
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|-----------------------|------------------------------------|
| (i) Length Overall | (ii) Length between perpendiculars |
| (iii) Breadth moulded | (iv) Breadth extreme |
| (v) Depth moulded | (vi) Draft |
| (vii) Freeboard | (viii) Camber |
| (ix) Sheer | (x) Rise of floor |
- (10 x 2 = 20)
- OR**
- II. Describe with sketches the Tonnage Mark. Explain Gross tonnage and Net Tonnage. (8 + 12 = 20)
- III. Explain the difference between sagging and hogging bending moments. Describe with sketches how you will generate (i) weight curve (ii) buoyancy curve (iii) load curve (iv) shear force curve (v) bending moment curve for a ship floating in still water. (20)
- OR**
- IV. (a) Describe with sketches any four sections used as plate stiffeners in ships. (7)
 (b) Describe with sketches (i) Butt weld (ii) Fillet weld (iii) Lap weld. (7)
 (c) Describe different methods of testing of welds. (6)
- V. Sketch the double bottom structure of longitudinally framed general cargo ship and mark all structural elements. (20)
- OR**
- VI. Sketch the double bottom structure of longitudinally framed Bulk Carrier ship and mark all structural elements (20)
- VII. Describe with sketches the fore end structure of a ship, showing bulbous bow, fore peak bulkhead, and chain locker arrangements. (20)
- OR**
- VIII. Describe with sketches the aft end structure of a ship, showing aft peak bulkhead, stern frame, stern tube, bossing and rudder trunk. (20)
- IX. Write short notes on any five of the following :
- | | |
|-----------------------|----------------------|
| (i) Plate preparation | (ii) Pre-fabrication |
| (iii) Launching | (iv) Rudder types |
| (v) Panting | (vi) Racking |
| (vii) Sea trials | |
- (5 x 4 = 20)