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***B.Tech. Degree IV Semester Examination in  
Marine Engineering June 2015***

**MRE 1407 SHIP TECHNOLOGY**

Time: 3 Hours

Maximum Marks: 100

- I. (a) Define the following parameters using a sketch of the profile view of a ship. (10)  
       (i) Length overall (ii) Length between perpendiculars  
       (iii) Length on water line (iv) Depth moulded (v) Freeboard  
 (b) Explain (i) hogging (ii) sagging (iii) racking (iv) pounding (v) panting. (10)
- OR**
- II. (a) What do you understand by grades of steel for ship construction? Neatly sketch and name common sections used for stiffening the steel plates. (10)  
 (b) Describe different tests carried out on welding and explain advantages and disadvantages of each. (10)
- III. (a) Describe the double bottom construction of a tanker indicating the various stiffeners used with a neat sketch. (10)  
 (b) Describe the structural members in a deck structure with figures. (10)
- OR**
- IV. (a) Explain various bulkheads and their requirements in a ship. (10)  
 (b) Describe the construction of a collision bulkhead with a neat sketch. (10)
- V. Describe the fore end arrangement of a ship with a neat sketch. (20)
- OR**
- VI. Describe aft end arrangements of a ship with a neat sketch. (20)
- VII. (a) Explain the calculation of tonnage as per 1969 convention. (10)  
 (b) Explain how load line marking are made in a ship. (10)
- OR**
- VIII. (a) Explain in detail layout of a shipyard with activities taking place at different locations. (10)  
 (b) Briefly explain (i) launching (ii) sea trial (iii) use of computers in ship design (iv) mould loft. (10)
- IX. (a) Describe different types of drilling ships and platforms. (10)  
 (b) Explain (i) dynamic positioning (ii) deep sea diving system. (10)
- OR**
- X. (a) What is a classification society and what are its functions? (10)  
 (b) Explain the constructional features and rule guide lines for a merchant vessel as per Marpol regulations. (10)