

**B.Sc. (NAUTICAL SCIENCE)**

**Term-End Examination**

**June, 2014**

**BNA-016 : CARGO HANDLING, STOWAGE  
AND SEAMANSHIP - I**

*Time : 2 hours*

*Maximum Marks : 70*

*Note : All questions are compulsory. Use of  
Non - Programmable scientific calculator is allowed.*

1. A vessel displaces 16000t at her summer load draft in SW. If she is now floating in DW of RD 1.015 with her summer load line on the water. Calculate how much DWT is available. **10**
2. A rectangular lockgate 40 m wide and 20 m high has water of RD 1.010, 12 m deep on one side and water of RD 1.020, 11 m deep on other. Find the resultant thrust experienced and the direction in which it acts. **10**
3. Sketch and explain following : **10**
  - (a) Camber
  - (b) Rise of floor
  - (c) Tumblehome
  - (d) Flare
  - (e) Sheer
  - (f) Forward perpendicular
  - (g) After perpendicular
  - (h) LBP
  - (i) Base Line
  - (j) Moulded Depth

4. (a) List five types of ships and respective cargoes carried by them. 5
- (b) What is ship sweat and cargo sweat ? How will you control them ? 5
5. List five safety precautions each to be taken :  $2 \times 5 = 10$
- (a) While working aloft
- (b) While Operating Mechanical Hatch Covers
6. (a) What is Mixed Mooring and where it is used ? Explain with sketch Tonsberg and Mandel shackle. 5
- (b) Sketch and show various parts of stockless anchor. 5
7. How do you explain corrosion ? List various types of corrosion and various methods used for prevention of corrosion. 10
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