

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

**Term-End Examination**

**June, 2010**

01530

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

*Time : 2 hours*

*Maximum Marks : 70*

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*Note : All questions are compulsory. Use of scientific calculator  
is permitted.*

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1. Write *five* precautions each for the following :  $3 \times 5 = 15$ 
  - (a) Painting Ship side (working aloft)
  - (b) Entering Aft Peak Tank
  - (c) Un-Berthing a vessel at forward station.
  
2. Define following terms with sketches, wherever required :  $6 \times 2 = 12$ 
  - (a) Grain Capacity
  - (b) Stowage Factor
  - (c) Dead Weight Cargo
  - (d) Ullage
  - (e) Measurement Cargo
  - (f) Proof Load

3. Define the following terms with sketches : **5x2=10**
- (a) Tumble home
  - (b) Sheer
  - (c) Run
  - (d) After perpendicular [AP]
  - (e) Moulded breadth
4. MV "Ignou Pride" is floating in dockwater **13**  
RD 1.016 with her winter load line 100 mm below  
water on the port side and 180 mm below water  
on the STBD side. If her FWA is 200 mm, TPC is  
24 and summer load draft is 9.6 mtrs. Find DWT  
available for Cargo.
5. Define following terms : **5x2=10**
- (a) Fresh water allowance (FWA)
  - (b) TPC
  - (c) Dead weight available
  - (d) Block coefficient [ $C_b$ ]
  - (e) Principle of flotation
6. Draw a neat sketch of a bulk carrier and show  
following parts : **5x2=10**
- (a) Double Bottom Tank
  - (b) Sounding Pipe for Hold Bilge
  - (c) Collision Bulkhead
  - (d) Weather Deck
  - (e) After Peak Tank