

B.Sc. (NAUTICAL SCIENCE)**Term-End Examination****June, 2008****BNA-016 : CARGO HANDLING, STOWAGE
AND SEAMANSHIP - I**

Time : 2 hours

Maximum Marks : 70

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

1. A collision bulkhead is in the form of a triangle, with sides 10 m, 13 m and 13 m. Find the thrust experienced by it, when sea water is run into the fore peak tank to a sounding of 9 m. (Take specific gravity of sea water as 1.025)

10

2. (a) Define the following terms :
- (i) Stowage Factor
 - (ii) Bale Capacity
 - (iii) Grain Capacity
 - (iv) Ullage
 - (v) Measurement Cargo

- (b) Sketch the Plimsol marks on port side of a vessel and label them. 5+5=10
3. Write five checks and five precautions that should be observed when entering a double bottom tank. 10
4. (a) Write at least five points reflecting care and maintenance for wire ropes.
- (b) When should a wire rope be condemned? 6+4=10
5. Explain the following giving five points each :
- (a) Precautions, while rigging portable ladder
- (b) Precautions, while working aloft 5+5=10
6. Explain the following with sketches, wherever applicable: 5x2=10
- (a) Rise of floor
- (b) Tumble home
- (c) Flare
- (d) Run
- (e) Length on Water Line (WL)

7. Draw the profile view of a bulk carrier and label the following parts :

5+5=10

- (i) Fore Peak Tank
- (ii) Cargo Hold Bilge Well
- (iii) Hold Bilge Sounding Pipe
- (iv) Forward Collision Bulkhead
- (v) Double Bottom Tanks

