

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)

June 2016 End Semester Examinations
B.Sc. (Nautical Science) - 2013 batch onwards
Semester III
Naval Architecture– III
(UG21T2309)

Date : 14.07.2016/F.N

Time: 3 Hrs

Maximum Marks: 70

Pass Marks : 35

NOTE: Attempt any SEVEN questions. All questions carry equal marks **7x10=70**
Use of Non-programmable scientific calculator is allowed. All Drawings to be neatly labelled

1. Explain with neat sketch a corrugated bulkhead.
2. Draw a neat sketch and explain the construction of a transversely framed Double Bottom tank.
3. Draw a neat sketch and explain the construction of a typical Forepeak tank.
4. Explain with simple sketch the following:
a)Sounding Pipe, b)Air Pipe
5. A Ship's water – plane is 150m long. Half-breadths at equal intervals from aft are:
2.97, 6.15, 7.84, 8.48, 8.06, 7.21, 5.72, 3.6 & 0m respectively.

Find a. The water-Plane area
b. The Area of Co-Efficient
6. A ship 150m long has HF= 3m fwd, TPC = 21 and MCTC = 275tm present drafts are 5.6m fwd & 6.2m aft. How many tones of SW must be transferred to the forepeak from the after peak, through a distance of 130m, to bring the ship on an Even Keel?
7. A ship 96m long is floating at 5m fwd and 6.4m aft MCTC = 180 tm, TPC = 16 , COF is 2m abaft H (HF 2m aft) find the location where a weight of 50t should be placed so as to keep the aft draft constant.
8. Explain in detail all the three Simpson's rules
9. M.V. 'Hindship' is at a draft of F 8.778 m, A 8.792 m, LCG, 72.34 m fwd of AP. She discharges 206 tonnes of cargo from No. 5 LTD. Calculate the drafts Frd and Aft.