

INDIAN MARITIME UNIVERSITY  
(A Central University, Government of India)  
End Semester Examinations Dec 2017  
B.Sc (Nautical Science) – Third Semester

**NAVAL ARCHITECTURE –III (UG21T2309)**

Date: 20.12.2017

Max. Marks: 70

Time: 3 Hours

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**Answer any five Questions:**

**5x14 = 70 Marks.**

1. Explain with simple sketch the following

a. Bilge Keel

**7marks.**

b. Corrugated bulkhead.

**7marks.**

2. Draw a neat sketch and explain the construction of a double bottom tank.

**14marks.**

3. Draw a neat sketch and explain all the strength members of a Forepeak tank.

**14marks.**

4. 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 Co-Efficient

**14marks.**

5. 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 a even keel?

**14marks**

6. A ship 96mlong 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.

**14marks.**

7. Explain in detail all the three Simpson's rules.

**14marks.**

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