

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

May/June End Semester Examinations
B.Sc. (Nautical Science) Sixth Semester
(AY 2013-14 to 2015- 16 batches only)

Naval Architecture - VI (UG21T2604)

Date : 09.06.2017
Time: 3 Hrs

Maximum Marks: 70
Pass Marks : 35

Section A
(Ship Construction) (3 x 10 = 30 Marks)
Attempt any THREE questions. All questions carry equal marks

- 1) Explain the items to be checked while preparing for load line survey.
- 2) Write short notes on the following:
 - a) Standard fire test b) A-class division
 - c) B-class division d) Fire control station.
- 3) Explain the following
 - a) Gross tonnage b) net tonnage
- 4) Write short notes on the following w.r.t. load line regulations
 - a) Type A ships b) Type B ships.

Section B

Question No.5 is compulsory. Attempt any THREE out of the remaining questions. All questions carry equal marks.

(4 x 10 = 40 marks)

- 5) Derive the following:

(a) $FWA = \frac{W}{40TPC}$

(b) $TPC_{sw} = 1.025 \times \frac{A}{100}$

- 6) A ship of 4000 tonnes displacement, 126m long, has $KM=6.7\text{m}$ and $KG=6.1\text{m}$. The centre of flotation is 3m aft of amidships, $MCTC=120\text{ tm}$.

Find the maximum trim at which the ship may enter a dry dock if the minimum GM at the critical instant is to be 0.3m.

- 7) Define "Angle of loll".

Explain the causes and the remedial actions for the same.

- 8) M.V. Hindship at a river port in water of RD 1.014 has a displacement 10230t. GM (fluid) 0.82m FSC 0.077m. She loads 470t of Cargo KG 9.8m. 150t of water ballast is run into No.1DB Tank. Find her final GM.

- 9) How loadicator helps in cargo planning, operation and damage conditions.
