

INDIAN MARITIME UNIVERSITY
(A Central University, Govt. of India)

B.Tech. (Marine Engineering) - Semester VI
December 2015 End Semester Examinations

Double Hull Tanker Vessels
Subject Code: UG11E1601

Time: 3 hrs
Date: 28.12.2015

Max Marks: 100
Pass Marks: 50

Part-A

(3x10=30 Marks)

Compulsory Question

1. a. State the reason behind the eradication of single hull tankers.
b. Define the term Segregated Ballast tank.
c. Superiority of Double hull construction over single hull tanker vessels.
d. Define Dead weight Tonnage.
e. Explain the need for a slop tank.
f. What is Raft Survey of tank?
g. How crude oil washing operation in double hull tanker made easier than single hull construction.
h. What is the use of Slop Bulkhead?
i. Explain the term collision Bulkhead.
j. what is the need of cargo tanks of oil tanker vessels to be kept with an inert atmosphere.

Part –B

(5 X 14 =70 Marks)

Answer any Five of the following

2. Draw a transverse cross sectional view of a Double Hull Tanker vessel and the name the parts of the structure. (14)
3. Write an essay on economical considerations of Double Hull Tanker vessel, justifying the cost of extra higher strength steel compensated. (14)
4. Explain the terms
 - a. Hull Weight estimate (3)
 - b. Free Surface effect (4)
 - c. Stress Concentration zone (4)
 - d. Duct Keel (3)
5. Draw a neat sketch of I.G.System of a tanker vessel and explain. (14)
6. Explain
 - a. CAS. (5)
 - b. Gas Freeing. (4)
 - c. Functions of Classification society. (5)
7. Brief about
 - a. Hydrostatic loading. (5)
 - b. Ballast Water Management. (5)
 - c. Alternative to Double hull tanker Design. (4)
8. Draw and explain the working principle of FRAMO cargo pump. (14)
