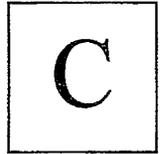


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***B.Tech. Degree IV Semester Regular/Supplementary Examination  
in Marine Engineering June 2024***

**19-208-0407 SHIP TECHNOLOGY  
(2019 Scheme)**

Time: 3 Hours

Maximum Marks: 60

**Course Outcome**

On successful completion of the course, the students will be able to:

- CO1: Understand the different terms used in ship construction and to analyse the stresses in ship structure.  
 CO2: Gain knowledge about the constructional details of bottom and side framing, shell and deck and bulk heads and deep tanks.  
 CO3: Understand fore end and aft end arrangements.  
 CO4: Calculate load line and tonnage and familiarize with the shipyard practice.  
 CO5: Understand offshore technology and the details of ship surveys.

Bloom's Taxonomy Levels (BL): L1 – Remember, L2 – Understand, L3 – Apply, L4 – Analyze, L5 – Evaluate, L6 – Create

PI – Programme Indicators

(Answer *ALL* questions)

(5 × 15 = 75)

	Marks	BL	CO	PI
I. (a) Draw the mid-ship section of a ship and mark the following:	6	L2	1	1.4.1
(i) Breadth (Moulded)				
(ii) Draft				
(iii) Depth (Moulded)				
(iv) Tumble Home				
(v) Camber				
(vi) Freeboard				
(b) Briefly explain hogging and sagging on the ship.	4	L1	1	1.4.1
(c) What are the different types of welding?	5	L1	1	1.4.1
<b>OR</b>				
II. (a) Explain Dwt and Light Weight of a Ship. Write three items in each of above.	8	L1	1	1.4.1
(b) A ship of 200 m length is having a displacement of 60,000 t and light of 9000 t. Ship is now modified to have 230 m length by adding a parallel midbody section at centre. Area at mid ship section is 350 sq, meter and Light weight is 40 t/m. Find initial and final Dwt.	7	L1	1	1.4.1
III. (a) Draw a neat sketch of bottom structure of a Bulk Carrier showing all strakes and mark various structural members.	12	L3	2	1.4.1
(b) Distinguish Solid Floor and Bracket Floor.	3	L1	1	1.4.1
<b>OR</b>				
IV. (a) Explain different types of bulk heads used in ship.	10	L3	2	1.4.1
(b) What is a Bulbous bow? Why it is provided in ship?	5	L3	2	3.1.1

(P.T.O.)

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		Marks	BL	CO	PI
V.	(a) Prepare the Plimsol marking of a ship as the summer draft:18 m FWA = 400 mm.	12	L2	3	3.1.1
	(b) Define free board in a ship.	3	L2	3	3.1.1
<b>OR</b>					
VI.	(a) Define GT and NT. How they are calculated?	10	L2	3	3.2.1
	(b) Explain how the load line marking done on a ship.	5	L2	3	3.2.1
VII.	Describe activities in a shipyard explaining functions of each division.	15	L3	4	1.4.1
<b>OR</b>					
VIII.	(a) What is the role of classification societies in a shipyard for the construction of a ship?	12	L3	4	1.4.1
	(b) What is their role after delivery of ship?	3	L3	4	1.4.1
IX.	Explain different types of offshore structures, vessels and its operations.	15	L2	5	1.4.1
<b>OR</b>					
X.	(a) What is 'Deep sea diving system'? Briefly explain 'SCUBA' diving.	10	L2	5	4.1.3
	(b) Briefly explain why the sea trials conducted in ships.	5	L2	5	4.1.3

Blooms's Taxonomy Level

L1 – 18%, L2 – 44%, L3 – 38%.

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