

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Govt of India)  
**End Semester Examinations-December 2018**  
**Semester-V**  
**B.Sc(Maritime Science)**  
**Ship Construction, Safety & Environmental Protection - III**  
**(UG22T2508)**

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Date: 04-01-2019

Maximum Marks: 70

Time: 3Hrs

Pass Marks: 35

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**PART - A**

1. Answer all the questions. **(5x2= 10 Marks)**
- (a) At dry dock name 4 items which are checked and surveyed?
- (b) What is meant by dynamic positioning? How it is achieved?
- (c) Name any five statutory certificates with their validity.
- (d) What is STCW? What are the objectives of STCW?
- (e) Which chapter of SOLAS deals with Bulk carrier safety?

**PART - B**

**Answer any five out of the following eight questions. (5X12=60 Marks)**

2. Draw midship section of a typical double hull tanker showing various structural members. (12 Marks)
3. What is the role of classification society and under whose authority do they work? (12 Marks)
4. What are Anchor Handling Tug Supply Vessel (AHTS) and diving support vessels? Discuss their important features. (12 Marks)
5. (a) What factors decide the composition of engineering watch? (6 Marks)  
(b) Indicate any five emergencies which can appear during watch. (6 Marks)

6. (a) What is the role of surveyors in construction of a ship? (6 Marks)  
(b) Briefly describe important activities in ship construction? (6 Marks)
7. (a) What are enhanced surveys and which ships are required to have them? (6 Marks)  
(b) What is harmonized system of survey and certification (HSSC)? (6 Marks)
8. (a) What is load line and what factors are taken into account in issuing load line certificate? (6 Marks)  
(b) Who issues the load line certificate and what is its validity? What checks are made during load line survey? (6 Marks)
9. Write short notes on any four – (4x3 = 12 Marks)
- (a) Oil record book
  - (b) Ballast water management
  - (c) Effect of SO<sub>x</sub> & NO<sub>x</sub> on environment.
  - (d) SOPEP
  - (e) Free Pratique & how it is granted to a vessel?

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