

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

**May/June 2016 End Semester Examinations**  
**B.Sc. (Nautical Science) - Second Semester (2013 batch onwards)**

**Bridge Equipment, Watch keeping & Col. Reg. - V (T 2502)**

**Date : 05.07.2016**

**Time: 3 Hrs**

**Maximum Marks: 70**

**Pass Marks : 35**

NOTE: Attempt any SEVEN questions. All questions carry equal marks. Use of Non-programmable calculator is allowed.

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**SECTION - A**  
(BRIDGE EQUIPMENTS)

Attempt any 3 questions from the following, all carry equal marks. (3 x 10 = 30)

1. a) Explain in brief the free gyroscope and its properties,  
b) Briefly explain the following with respect to a Gyro Compass
  - (i) Latitude error
  - (ii) Speed error(10)
2. (a) What are the principle parts of the Gyro Compass. (10)  
(b) Describe Standard Information Exchanged by the AIS transducer.
3. Describe the Voyage Data Recorder and its benefits on board ship. (10)
4. (a) Describe Bridge Navigation Watch System, how many alarm stages it has got.  
(b) What is Ship Security Alert System, and when to use it. (10)

**SECTION - B**  
(WATCH KEEPING)

Attempt any 2 questions from the following, all carry equal marks. (2 x 10 = 20)

5. Describe precautions you will take if your vessel encounters rough weather. (10)
6. What preparations you will carry out before proceeding to sea from a port. (10)
7. Describe the following: (10)
  - (i) Advantages of ship's routing
  - (ii) Concept of INDSAR.

**SECTION - C**  
(COLLISION REGULATIONS)

Attempt any 2 questions from the following, all carry equal marks. (2 x 10 = 20)

8. Describe additional signals for fishing vessel when fishing in close proximity. (10)
9. How you will recognize that risk of collision exists and what precautions you will take. (10)
10. What measures you will take if your vessel encounters restricted visibility at sea.(10)

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