

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

May/June 2016 End Semester Examinations  
Diploma in Nautical Science (DNS)  
Second Semester (2015 batch onwards)

Navigation IV (UD11T 3202)

ADVANCED BRIDGE EQUIPMENT, WATCH KEEPING & METEOROLOGY

Date :09.06.2016

Maximum Marks: 70

Time: 2 Hrs

Pass Marks : 35

NOTE: Attempt Q. No.1 and any other 3 questions from Section – A  
Attempt Q. No.6 and any other 2 questions from Section – B.  
All questions carry equal marks  
Use of 'Ship's Weather Code 1982' is permitted in the exam hall.

Section - A

1. a) Explain what is meant by Safe Speed and Risk of Collision?  
b) Describe with the help of sketch Rule 19 d(i) and d(ii). (5 + 5 Marks)
2. a) Explain your actions in case of failure of all modes of steering from the bridge.  
b) Explain the factors that affect target detection on a Marine Radar. (5 + 5 Marks)
3. Compare the advantages and disadvantages of using the information obtained from AIS. (10 Marks)
4. a) Explain the various circumstances under which to call master when at sea?  
b) Explain the duties associated when restricted visibility is expected or encountered. (5 + 5 Marks)
5. a) Explain the various checks and markings required on a course recorder.  
b) Describe the basic principles of bridge team work and bridge resource management. (5 + 5 Marks)

Section - B

Meteorology

6. Decode the following weather report: (10 Marks)

BBXX	8PNN	16043	99001	10459	41594
70515	10285	20208	40100	51026	71794
8439/	22200	00206	20401	327//	40803

7. a) Explain the following Terms: (5 + 5 Marks)  
i) Drizzle (ii) Hail (iii) Snow (iv) Sleet (v) Fog
- b) Explain the factors which affect visibility
8. a. What are the signs which will indicate an approaching 'Tropical Revolving Storm'  
b. Explain 'Buys Ballot's Law' and its use (5 + 5 Marks)
9. With the help of a simple sketch, identify the different Ocean Currents which are present in the North and South Atlantic Ocean. Identify which among them are Warm Currents and Cold Currents (10 Marks)

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