

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)  
End Semester Examinations Dec 2019  
**DIPLOMA IN NAUTICAL SCIENCE (DNS)**  
**Semester : II**  
**NAVIGATION-IV- ADVANCE BRIDGE EQUIPMENT, WATCH KEEPING AND**  
**METEOROLOGY**  
**(UD11T3202)**

Date: 10-12-2019

Max Marks: 70

Time: 2 Hrs

Pass Marks: 28

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**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.**

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- Q1) a) Explain the rule "RESTRICTED VISIBILITY" in your own words. (2X5=10)  
b) Sketch the night and day signal of following vessels.  
i) NUC  
ii) RAM  
iii) Pilot vessel  
iv) Trawler  
v) Vessel aground.
- Q2) Explain the working of marine radar with block diagram. (10 Marks)
- Q3) a) What are the static and dynamic data obtained from AIS. (2x5= marks)  
b) Explain the working of BNWAS.
- Q4) a) Explain the various situation in which Master can be called on Bridge. (5 marks)  
b) How will you take over the navigation watch at sea during night. (5 marks)
- Q5) Explain in brief. (5x2=10 marks)  
a) Deck log book  
b) GPS log  
c) Compass error log book  
d) Ship reporting system  
e) Eco sounder log.

**PART –B: METEOROLOGY**

- Q6) Decode the following. (10 marks)
- BBXX VHAN 16003 99000 10469 41593 70510 10285 20208  
40088 53036 70694 84299 22242 00206 20401 327// 40808
- Q7) a) How clouds are classified. (2X5=10 marks)  
b) What are the various forms of condensation?
- Q8) a) Explain the formation and characteristics of cyclone or low. (2X5=10 marks)  
b) What is cold and warm front.
- Q9) a) How ocean currents are formed. (2X5=10 marks)  
b) Explain the causes and movements of TSUNAMI.