

INDIAN MARITIME UNIVERSITY
(A Central University Government of India)
END SEMESTER EXAMINATIONS - Dec 2019
Diploma in Nautical Science
Semester - II
Navigation-IV - Advanced Bridge Equipment, Watch-keeping and Meteorology
(UD11T1202)

Date: 10-12-19
Time: 2 Hrs

Max Marks: 70
Pass Marks: 28

- Use of Non-Programmable Scientific Calculator and ship's weather code is allowed is allowed.
- Part A – Answer any 4 questions out of 5.
- Part B: Answer any 3 questions out of 4.
- All questions carry equal marks.

Part A

- 1) Draw a basic block diagram of a Marine Radar and explain the function of the Magnetron and Scanner. (10 Marks)
- 2) List various errors of the GPS (10 Marks)
- 3) (a) Explain the principles to be followed while on look-out duty. (5 Marks)
(b) State 5 occasions when you should call the Master on the bridge. (5 Marks)
- 4) (a) How will you deem that a risk of collision exists at sea. (5 Marks)
(b) What shall be the nature of an action to avoid collision. (5 Marks)
- 5) With respect to traffic separation schemes and Narrow Channels (as appropriate) answer the following: (5x2=10 marks)
 - a. Which all vessels can enter the Inshore Traffic Zone?
 - b. What are the rules for entering and leaving a Traffic lane other than the termination areas?
 - c. What are rules for crossing a lane?
 - d. What are the rules for proceeding along a narrow channel?
 - e. What are signals to be made in a narrow channel while nearing a bend?

Part-B

- 6) Define Visibility and explain the various factors affecting the visibility?(10 Marks)
- 7) Explain in detail the warning signs of approaching of Tropical Revolving Storm. (10 Marks)
- 8) Decode following weather report: (10 Marks)

BBXX	ATVH	10123	99408	30492
41398	62828	10143	20082	40084
56028	76364	84364	22234	00175
20808	302//	41006		
- 9) Explain in detail and with diagram: (10 Marks)
 - i) 'drift'
 - ii) 'upwelling'
 - iii) 'gradient' currents, with one example of each.