INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
END SEMESTER EXAMINATIONS- DECEMBER 2018
B.Sc. (Nautical Science)
SEMESTER-V
Coastal Navigation & Collision Prevention Regulations
(UG21T3501)

Date: 26.12.2018 Maximum Marks: 70
Time: 3Hrs Pass Marks: 35

Note: 1. **Question No. 1 is compulsory**. English Channel Chart.
2. Answer any 4 question from remaining 5 questions.
3. Deviation card –I and Tide chart to be provided by the exam centre

PART - A
(Coastal Navigation)

Q.1 Find the height of tide at 1930hrs.Standard time on 4th February at DARWIN. Extract from the tide tables for the day under reference are as under. (10 marks)

Extract from A.T.T		
	TIME	HEIGHT
	0315.....	1.7m
4th	0904.....	6.5m
Feb	1502	1.9m
Fri	2112	6.9m

Q2. From a ship, the following horizontal sextant angles were obtained:- Needles Pt.Lt. Ho.33° St. Catherine Pt.Lt. Ho.and St. Catherine Pt.Lt.Ho.49° Nab Tower Find the Ship's Position. (10 marks)

Q3. Explain in detail the Cardinal Buoy marking as per **IALA** Maritime Buoyage System. (10 marks)

Q4. (a) At 0600 hrs. Les Hanois Lt. Ho.bore 106° (C) distance 7miles. Ship's head 035°(C). Find the Ship's position at 0600hrs.

(b) From this position, the ship then steered 045° (C) until 0848 hrs, when course was altered to 105° (C). This course was maintained until Pte.de Barfleur Lt.Ho.was abeam on the starboard side. Also the time when Pte.de.Barfleur light will be abeam.

(c) While on the second course at 0926hrs. Alderney Lt.Ho.bore 4 points on the stbd. bow and at 1014hrs. it was abeam. Find the ship's position at the time of beam bearing. (Variation 8° W, ships speed 10 knots throughout). (10 marks)

Q5. The ship's position at 1000 hrs was found with Start Point Lt.Ho.bearing 298° (T) distance 8 miles. Find the compass course to steer so as to pass "Shambles Lt. Vessel 4miles off to port, counteracting a current known to be setting 285° (M) at 2 Knots. Also find the speed made good. (Variation 9°W, ship's engine speed 10 knots.) (10 marks)

Q6. (a) Explain the four stages of Passage Planning.
(b) List out the publication required to be carried onboard for the passage planning. (5 x2 = 10 marks)

PART – B

(Collision Prevention Regulations)

Note: 1. **Question No. 7 is compulsory.**
2. Answer any 1 question from remaining 2 questions.

Q.7. Define the following (2 x 5 =10 marks)
(a) Vessel constrained by her draught
(b) Vessel not under command
(c) Vessel restricted in her ability to maneuver
(d) Safe speed
(e) Vessel engaged in Fishing.

Q8. Explain in your own words the
Rule No.19 'conduct of vessels in Restricted visibility' (10 marks)

Q.9. Draw a neat diagram of Arc of visibility of 'Navigational lights' (10 marks)

DEVIATION CARD I

Ship's Head by Compass	Deviation	Ship's Head by Compass	Deviation
000^0	2.0^0W	180^0	2.0^0E
010^0	3.5^0W	190^0	3.5^0E
020^0	5.5^0W	200^0	5.0^0E
030^0	7.0^0W	210^0	7.0^0E
040^0	9.0^0W	220^0	8.5^0E
050^0	10.0^0W	230^0	10.0^0E
060^0	11.5^0W	240^0	11.0^0E
070^0	12^0W	250^0	12.0^0E
080^0	12.5^0W	260^0	13.0^0E
090^0	12.5^0W	270^0	12.5^0E
100^0	11.5^0W	280^0	11.5^0E
110^0	10.5^0W	290^0	10^0E
120^0	9.0^0W	300^0	8^0E
130^0	7^0W	310^0	6.5^0E
140^0	5^0W	320^0	4.5^0E
150^0	3^0W	330^0	2.5^0E
160^0	1^0W	340^0	1.0^0E
170^0	0.5^0E	350^0	0.5^0W
180^0	2.0^0E	360^0	2.0^0W

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