

INDIAN MARITIME UNIVERSITY
(A Central University Government of India)
END SEMESTER EXAMINATIONS-June/July 2019
B.Sc Nautical Science
Semester-VI
Ship Manoeuvring & Collision Prevention Regulations
(UG21T3603)

Date: 28-06-2019

Maximum Marks: 70

Duration: 3 hrs.

Pass Marks: 35

Note: Question No. 1 is compulsory.

Answer any 6 questions from remaining 8 questions (each of 10 marks).

Scientific Calculator is permitted if required.

-
- Q.1 Answer the following (2 x 5 =10 marks)
- (a) State what is the swinging circle of a vessel at anchor?
 - (b) Define freeboard of a ship.
 - (c) State what is snap back zone during mooring operations?
 - (d) Define "power driven vessel".
 - (e) State what do you understand by "vessel underway".
- Q2. (a) Describe Bitter end securing/release arrangement of anchor cable (5 marks)
- (b) What are the duties of OOW during anchor watch? (5 marks)
- Q3. State any 5 important factors to be considered before deciding on a position for dropping anchor and by observing the cable how can you determine whether the anchor is holding or dragging. Explain (10 marks)
- Q4. (a) Sketch the turning circle of a ship and mark "tactical diameter, advance, and transfer". (5 marks)
- (b) Describe the "Williamson turn" for rescue of a man overboard. (5 marks)
- Q5. (a) What criteria will be taken for discarding a wire rope used for mooring operations (5 marks)
- (b) Discuss various steps to be taken by a vessel on a tanker terminal if heavy load develop on the mooring lines. (5 marks)
- Q6. (a) What are the factors to be taken into account in determining safe speed as per Rule 6 of COLREG (IRPCS72) (5 marks)
- (b) What does Rule 22 prescribe with respect to minimum range of navigational lights for a power driven vessel of more than 50 meters length. (5 marks)

- Q.7. (a) List out 5 actions you will take in the case of collision with another vessel. (5 marks)
- (b) What are the precautions to be taken during embarkation and disembarkation of pilot by pilot ladder? (5 marks)
- Q8. (a) List out 5 factors which will affect the turning ability of a ship with respect to Rapid Turn Technique. (5 marks)
- (b) Discuss the immediate actions to be initiated if a vessel runs aground. (5 marks)
- Q.9. (a) What are the factors to be considered during "Risk assessment" prior to transiting a high risk piracy zone. (5 marks)
- (b) Discuss the basic principles of ship handling in ice. (5 marks)
-
-