

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
END SEMESTER EXAMINATIONS – DECEMBER 2019
B.Sc. (Nautical Science)
Semester: II

UG21T3205- SHIP OPERATION TECHNOLOGY-II (SOT-II)

Date: 10-01-2020
Time: 3 Hours

Max Marks: 70
Pass Marks: 35

Note: Question No. 1 is compulsory.
Answer any 6 questions from remaining 8 questions.
Sketch to be drawn wherever relevant.

Q1. Answer the following (10 x 1 = 10 Marks)

- a) When the ship is alongside a wharf the safe access to the ship is by the
1. Gangway
 2. Combination ladder
 3. Pilot ladder
 4. Coolie ladder
- b) Abandoned ship is indicated by
1. Continuous ringing of ship's bell
 2. Seven short and one long blast on ship's whistle
 3. Master's verbal orders
 4. Intermittent ringing of the ship's bell.
- c) When the low pressure alarm sounds on the SCBA the user should
1. Close the air bottle valve
 2. Vacate the compartment immediately.
 3. Monitor the pressure in the bottles.
 4. Remove the face mask
- d) An Emergency Alarm is sounded when the ship
1. is Altering course.
 2. is Navigating in heavy traffic.
 3. has had a Main Engine Failure.
 4. is overtaking another ship in a TSS.
- e) Life jackets have the following attached to it
1. Light, whistle and retro reflective tape
 2. Light and whistle
 3. Light and retro reflective tape
 4. Whistle and retro reflective tap

- f) The purpose of SOLAS to
1. Enhance safety of life at sea
 2. Advise ship officer on how to navigate their ship
 3. How to launch life boat
 4. How to conduct boat / drills
- g) To make a temporary eye at one end of the rope, the most useful knot is
1. Timber Knot
 2. Figure of eight knot
 3. Bowline
 4. Overhand knot
- h) The knot used at the end of the heaving line is a
1. Bowline on the bight
 2. Crown knot
 3. Bucket hitch
 4. Monkey fist
- i) The intercode flag which is hoisted when a ship has Diver Down
1. A
 2. H
 3. Z
 4. P
- j) The intercode flag which is hoisted when the vessel requests Free Pratique
1. T
 2. Q
 3. J
 4. P

Q2. 2x5=10 marks

- a. Write short notes on names and timings of Nav watches.
- b. Write short notes on Personal Protective Equipment (PPE)

Q3. 2x5=10 marks

- a. Explain in detail the construction of wire ropes and the advantages of having a fibre heart in the wire ropes.
- b. Write short notes on care and maintenance of wire ropes.

Q4. 2x5=10 marks

- a. What are the types of Fibre ropes used onboard ship?
- b. Write short notes on care and maintenance of Fibre ropes

Q5. 2x5=10 marks
a. With a neat simple sketch locate the following on a ship:
Jack staff, Ensign staff, Triatic stay, Foremast Yardarm, Main mast head.
b. Write short notes on Courtesy flag and Quarantine flag.

Q6. Write about the precautions to be taken during 2x5=10 marks
a. Working aloft
b. While Entering into Enclosed space.

Q7. 2x5=10 marks
a. Write in detail about the importance of personal health and hygiene
onboard ship.
b. Write any ten contents of code of safe working practices for Merchant
seamen.

Q8. 2x5=10 marks
a. Explain the safety precautions to be taken while rigging gangway and the
pilot ladder.
b. Write short notes on safe bunkering practices.

Q9. 2x5=10 marks
a. Write in detail about the permit to work system
b. Write the basic things covered in a hot work permit checklist.
