

INDIAN MARITIME UNIVERSITY
(A Central University Government of India)
END SEMESTER EXAMINATIONS-June/July 2019
B.Sc Nautical Science
Semester-I
SHIP OPERATION TECHNOLOGY
(UG21T4205)

Date: 04-07-2019

Maximum Marks: 70

Duration: 3 hrs.

Pass Marks: 35

Note: Question No. 1 is compulsory.

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

Q.1

(1 x 10 = 10 marks)

A. Lookout man

- a. is required only at night
- b. is not required at all
- c. is mandatory for all sea watches
- d. is not required for a ship with working radar

B. Standard marine compass has

- a. 8 points
- b. 16 points
- c. 24 points
- d. 32 points

C. Fungus does not affect

- a. Manila rope
- b. Sisal rope
- c. Nylon rope
- d. Hemp rope

D. Courtesy flag is flown at

- a. Main mast extreme starboard
- b. Main mast extreme port side
- c. Fore mast only
- d. Anywhere it is best seen

E. Ensign flag for an Indian merchant ship is

- a. White ensign
- b. India's national flag
- c. Blue ensign
- d. Red ensign

F. While manually lifting a weight of 30 kgs,

- a. Keep spine straight
- b. Keep hands straight
- c. Call for help to share load and follow actions in "a" and "b"
- d. Carry it on head

G. While working overside

- a. Life jacket must be used
- b. Buoyant work vest must be used

- c. Vest/Lifejacket is not required for swimmers
- d. If life buoy is provided, vest/Lifejacket is not required

H. Person working on a ship is responsible for

- a. reporting deficiencies and conditions causing concern
- b. Own safety and that of others
- c. contributing views on how things could be made safer
- d. All of above

I. Toolbox talk

- a. is done before starting of the job
- b. is key tool to maintain safety at work place
- c. Gives clear understanding and awareness of hazards and associated risks
- d. All of above

J. Incident investigation includes

- a. all accidents and near misses only
- b. all accidents, unsafe acts and unsafe conditions only
- c. all accidents and non-conformities only
- d. all accidents, near misses, unsafe acts, unsafe conditions and non-conformities

Q2. (a) Describe sea watchkeeping system on a ship (5 marks)

(b) Describe following sea terms (5 marks)

1. Focsle
2. Superstructure
3. Cofferdam
4. Fender
5. Skylight

Q3. (a) Compare Natural fibre and Synthetic fibre ropes. (5 marks)

(b) Describe what is meant by whipping and name three types of whipping. (5 marks)

Q4. (a) Describe care and maintenance of wire ropes. (5 marks)

(b) How does fibre heart help in lubrication of wire ropes. (5 marks)

Q5. (a) Draw a flag showing following parts (5 marks)

1. Hoist
2. Fly
3. Tack line
4. Flag hook
5. Bunting

(b) Explain meaning of following terms (5 marks)

1. Courtesy flag
2. Jack flag
3. Quarantine flag
4. Pilot flag
5. Blue peter

- Q.6. (a) Describe personal protection equipment to protect Head, Hearing, Eyes, Hands and Feet (5 marks)
- (b) List precautions to be taken before Entering into Enclosed spaces (5 marks)
- Q.7. (a) List precautions to be taken for safe rigging of a pilot ladder. (5 marks)
- (b) List safety precautions to be taken while using portable ladders (5 marks)
- Q.8. (a) List safety precautions to be observed while repairing Radar scanner on Radar mast (5 marks)
- (b) List safety precautions to be observed while working with power tools (5 marks)
- Q.9. (a) Describe "permit system" as used on a ship with 3 examples (5 marks)
- (b) Describe practices for maintaining good hygiene and health Onboard Ship. (5 marks)
