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B.Tech. Degree IV Semester Supplementary Examination in Marine Engineering May 2016

MRE 406 SEAMANSHIP AND NAVIGATION

Time : 3 Hours

Maximum Marks : 100

(5 × 20 = 100)

I. Write short notes on:

(5 × 4 = 20)

- (a) Forecastle deck.
- (b) Steering platform.
- (c) Anchor lashing arrangements.
- (d) Hatch covers.
- (e) Galley.

OR

II. (a) What is the topmost deck on a ship known as and what are the important fittings on that deck? (10)

(b) Explain function and operation of deck cranes and derricks. (10)

III. (a) Write short notes on the uses of the following of *any five*: (5 × 2 = 10)

- (i) Reef knot
- (ii) Rolling hitch
- (iii) Sheet bend.
- (iv) Bow line.
- (v) Carrick bend.
- (vi) Clove hitch.

(b) Describe two visual means of signalling available on ships. (10)

OR

IV. Draw the sketch of a vessel moored at a berth showing all the mooring lines with their names. (20)

V. Describe the functioning of the following equipment with sketches as applicable: (20)

- (i) SART
- (ii) EPIRB
- (iii) AIS
- (iv) Sextant

OR

VI. (a) Describe the working principle of a ship's radar and describe its controls. (10)

(b) What is the use of barometer on board and describe its functioning. (10)

VII. (a) Make a sample emergency muster list of a cargo ship detailing its contents. (10)

(b) Describe the launching procedure of an inflatable liferaft. (10)

OR

VIII. (a) List out lifeboat equipment as per SOLAS. (8)

(b) Describe launching procedure of a lifeboat from a gravity type davit. (12)

IX. (a) List the mandatory pyrotechnics that have to be carried on board cargo ships as per SOLAS and explain their use. (10)

(b) List out at least 10 internationally recognized distress signals. (10)

OR

X. (a) Briefly discuss the various annexes of MARPOL 73/78. (10)

(b) What all entries do you have to make in the Oil Record Book as per Annex 1 of MARPOL? (10)