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

MRE 1406 SEAMANSHIP AND NAVIGATION

Time: 3 Hours

Maximum Marks: 100

(5 × 20 = 100)

- I. Write short notes on: (20)
- (i) Lookout duties at sea.
 - (ii) Morse code.
 - (iii) Courtesy flag.
 - (iv) Collision bulkhead.
 - (v) Chain register.
- OR**
- II. (a) Draw a neat diagram and label the different parts of an anchor. (10)
- (b) Explain the situations under which a vessel will be required to anchor. (5)
- (c) State the precautions to be taken while at anchor. (5)
- III. Briefly explain the working principle of the following equipment with suitable sketches wherever applicable. (20)
- (i) Voyage data recorder.
 - (ii) Gyro compass.
 - (iii) Radar
 - (iv) EPIRB
- OR**
- IV. (a) Explain the procedure of lowering lifeboat by gravity davit. (10)
- (b) Describe HRU and its uses. (5)
- (c) What is SART? (5)
- V. (a) Draw the basic construction of a 3 strand rope and name the parts. (15)
- (b) Describe a sea anchor. (5)
- OR**
- VI. (a) How can we determine the position of our vessel with a light house? (10)
- (b) What do you understand by constellation? (5)
- (c) What is the relevance of "Polaris"? (5)
- VII. What will be your actions upon having an oil spill while receiving bunkers? (20)
- OR**
- VIII. (a) What are the criteria for discharge of oil from the cargo space of a tanker under Annex 1 of MARPOL 73/78. (10)
- (b) What all entries have to be made in Oil Record Book as per Annex 1 of MARPOL? (10)
- IX. (a) What is the maximum carrying capacity of a life boat? (5)
- (b) Compare a davit launched life boat with a free fall life boat. (5)
- (c) What is the need to carry life rafts on board in addition to life boats? (5)
- (d) How are life rafts launched? (5)
- OR**
- X. Draw the diagram of a inflated life raft and mark the important parts. (20)