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***B.Tech. Degree IV Semester Examination in
Marine Engineering May 2017***

**MRE 1406 SEAMANSHIP AND NAVIGATION
(2013 Scheme)**

Time: 3 Hours

Maximum Marks: 100

(5 × 20 = 100)

- I. Who allocates the day to day works in engine room and what are the watch keeping timings and duties of different category of engineers?
OR
- II. Describe with a sketch the anchor cable bitter end arrangement on a ship.
- III. What is the working principle of radar? Describe its main controls.
OR
- IV. What are the functions of AIS and what additional features does it provide when compared with radar?
- V. Explain with diagrams wherever required:
(i) GHA.
(ii) Greenwich meridian.
(iii) Equinoctial.
(iv) Declination.
OR
- VI. List out the equipment required to be carried in lifeboat of a vessel on international voyages.
- VII. Prepare a lifeboat muster list with duties assigned for a ship (with 2 lifeboats) and a complement of 20 persons.
OR
- VIII. Briefly discuss the different annexes of MARPOL and give their adoption years.
- IX. What are the criteria for discharge of oily water mixture from machinery spaces or fuel tanks of a ship outside special areas?
OR
- X. Draw the basic construction of a fibre rope and name its parts.