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

**MRE 1604 MARINE INTERNAL COMBUSTION ENGINES II  
(2013 Scheme)**

Time : 3 Hours

Maximum Marks : 100

(5 × 20 = 100)

- I. Explain S&D two stroke diesel engine starting air distributor. Comment on safety fittings on starting air line.
- OR**
- II. Explain reversing servomotor in sulzer engine with suitable sketches. Name safety interlocks in starting and reversing system.
- III. Explain S&D piston used in medium speed diesel engine. How to inspect a piston at what periodicity?
- OR**
- IV. Write short notes on :
- (i) High temperature corrosion.
  - (ii) Lubrication in medium speed engine.
  - (iii) Poor quality of lubricating oil.
  - (iv) Lubricating oil contamination.
- V. Explain routine inspection of crosshead bearing; at what interval. Comment on the inspection report and suitability of the bearing for further use.
- OR**
- VI. Discuss procedure to replace a crosshead bearing with a new one, step by step.
- VII. Describe alarm system fitted in an unattended machinery space. Explain action taken on an alarm.
- OR**
- VIII. Write short notes on :
- (i) Variable injection timing.
  - (ii) Remote control of propulsion engine.
  - (iii) Electronic governor.
  - (iv) Condition monitoring.
- IX. With suitable sketches describe components of marine gas turbine. With respect to marine gas turbine installation discuss different stages of air filtration system.
- OR**
- X. With simple illustrative sketches, explain various configurations of gas turbine. With respect to emission of NO<sub>x</sub> and Sox compare gas turbine with that of slow speed marine diesel engine.