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***B.Tech. Degree VII Semester Examination in Marine Engineering
February 2021***

**MRE-1801 SAFE WATCH KEEPING AND ENGINE ROOM RESOURCE MANAGEMENT
(2013 Scheme)**

Time: 3 Hours

Maximum Marks: 100

(5 × 20 = 100)

- I. Explain various criteria considered necessary for keeping an engine room watch as per STCW code-2010. (20)
- OR**
- II. Explain the basic principles to be observed in watch keeping of an engine room and why protection of marine environment is important. (20)
- III. (a) Describe the special requirements for watch keeping engineer officer on gas tankers. (10)
- (b) What are special precautions taken to prevent fire in oil tankers? (10)
- OR**
- IV. Write short notes on: (20)
- (i) Periodic checks of machinery
- (ii) Preventive maintenance of machinery
- (iii) Navigation in congested waters and during restricted visibility
- V. (a) Explain the procedure for taking over and handing over of an engineering watch. (15)
- (b) Describe a commonly used engine room watch keeping arrangement and schedule. (5)
- OR**
- VI. What are the routine jobs carried out during a watch? Indicate the certification of watch keeping personnel and their duties. (20)
- VII. Write short notes on the following: (20)
- (i) Load line convention
- (ii) Tonnage convention
- (iii) D.O.C
- (iv) S.M.C
- OR**
- VIII. (a) Explain engine room resource management. (5)
- (b) What is meant by conflict management? Which convention is protecting the rights of the seafarers and how conflicts should be resolved while working in multi cultural environment? (15)
- IX. (a) Discuss the role of onboard training in developing the competencies of a marine engineer. (10)
- (b) Explain the importance of situational awareness and risk assessment. (10)
- OR**
- X. Write short notes on the following: (20)
- (i) Communication barriers
- (ii) Maintenance management
- (iii) Decision making process
- (iv) Standard operating procedures