

**GANPAT UNIVERSITY**  
**B. TECH SEM- IV (Marine)**  
**REGULAR EXAMINATION– APRIL-JUNE 2017**  
**2MR604 Marine Auxiliary Machines II**

TIME: 3 HRS

TOTAL MARKS: 60

**Instructions:** (1) This Question paper has two sections. Attempt each section in separate answer book.  
 (2) Figures on right indicate marks.  
 (3) Be precise and to the point in answering the descriptive questions.

**SECTION: I**

**Q.1** Why Oily Water Separators are necessary to prevent discharge of oil from the ships? Which regulations control discharge of oil? Explain oil monitoring system using Direct light method and Ultraviolet fluorescence method. (10)

**OR**

**Q.1** Describe dry docking procedure of a ship including advance preparation, safety checks during dry-dock and precautions after dry-docking. (10)

**Q.2** Why Bow thrusters are installed on ships? What types of bow thrusters are used on ships? Explain with any one type of bow thruster. (10)

**OR**

**Q.2** Explain with sketch Waste oil (or sludge) Incinerator used on ships. (10)

**Q.3** Why the discharge of untreated sewage in controlled or territorial waters is prohibited? Describe biological type sewage treatment plant. (10)

**SECTION: II**

**Q.4** Enlist various methods of shaft alignment. Sketch & describe anyone of them. (10)

**OR**

**Q.4** Sketch and describe Stern Tube sealing arrangement. (10)

**Q.5** (a) Why it is difficult to lubricate the Crosshead bearing of two stroke Engine? (05)

(b) What do you understand by Resonance? Explain Barred Zone Range. (05)

**OR**

**Q.5** What do you understand by Emergency Steering? Explain the procedure for it. (10)  
 Describe the actions to be taken, upon receiving a telegraph order for "Emergency Full Astern" What are the factors to be considered?

**Q.6** Sketch and Describe a Safematic Steering System. (10)

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