

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- VIth SEMESTER-EXAMINATION – MAY- 2012****Subject code: 161802****Date: 11/05/2012****Subject Name: Marine Electrical Technology and Machines****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Principle of action of three phases synchronous motor. **07**
(b) Explain short circuit test and open circuit test on synchronous alternator. **07**

- Q.2** (a) Draw and explain single turn alternator. **07**
(b) Derive E.M.F. equation of an alternator. **07**

OR

- (b) Explain Merits & Demerits of A.C. & D. C. on ships. **07**

- Q.3** (a) Explain characteristics of brushless high speed A.C. generators.. **07**
(b) What is starter? How it is used for sequential starting and automatic fired? **07**

OR

- Q.3** (a) Explain construction of brushless high speed A.C. generators **07**
(b) Explain arrangements of preferential trips & Protective devices with wiring diagrams. **07**

- Q.4** (a) Explain rules and regulations governing electrical machinery on ships. **07**
(b) Explain : (1) Different Insulation **07**
(2) Magnetic Disc
(3) Brakes

OR

- Q.4** (a) Explain characteristics of continuous maximum rated machine. **07**
(b) Explain rotary generators with diagram. **07**

- Q.5** (a) What are the Special requirements of motors & starters for Anchor Windlass & Capstan ? **07**
(b) Explain any two classes of insulation. **07**

OR

- Q.5** (a) Explain centralized control of Motors in machinery spaces. **07**
(b) Explain any two safety devices or equipments for sequential starting. **07**
