Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE- SEMESTER- 1st / 2nd EXAMINATION - SUMMER 2016

Subject Code: TEE015 Date: 02/06/2016 **Subject Name: Electrical Technology** Time:10:30 AM to 1:00 PM **Total Marks: 70 Instructions:** 1. Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. Q.1 What is power factor? Explain causes of low power factor. 07 (a) Compare 3-phase A.C. supply with 1-phase A.C. supply. **(b)** 07 **Q.2** Explain basic principle of electromechanical energy conversion. 07 (a) Compare d.c. generator with d.c. motor. **(b)** 07 **Q.3** Explain classification of electrical machines. **07** (a) Explain construction and working principle of d.c. generator. **(b) 07 Q.4** (a) Explain construction features of 3-phase induction motor. **07** Discuss starting methods of 3-phase induction motors. **07 (b)**

Explain construction and working principle of synchronous motor.

Explain J-K flip flop. How this flip flop is differ with R-S flip flop.

What is electric drive? Explain classification of electrical drive.

Explain the types of d.c. motors.

Explain methods of speed control of d.c. motors.

Q.5

Q.6

Q.7

(a)

(b)

(a)

(b)

(a) (b)

Explain AND gate, OR gate, NAND gate and NOR gate with truth table.

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