Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty: Dr Abrar Ahmed Subject Code: 4EE4-21

Lab: Electrical Machine – II Lab

Department: Department of Electrical Engineering (EE & EEE) SEM: IV

Total No. of Lab: 12

COURSE OUTCOMES HERE

Atthe end of this course students will be able to:

CO1: To study various types of starters used for 3 phase induction motor.

CO2: To perform load test on 3-phase induction motor and calculate torque, output power, input power, efficiency, input power factor and slip for various load settings.

CO3: Draw the circle diagram and compute the following (i) Max. Torque (ii) Current (iii) slips (iv) p. f. (v) Efficiency.

CO4: To study effect of variation of field current upon the stator current and power factor of synchronous motor andPlot V-Curve and inverted V-Curve of synchronous motor for different values of loads

Lab No.	Topic
1	To study various types of starters used for 3 phase induction motor.

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2	To connect two 3-phase induction motor in cascade and study their speed control.
3	To perform load test on 3-phase induction motor and calculate torque, output power, input power, efficiency, input power factor and slip for various load settings.
4	To perform no load and blocked rotor test on a 3-phase induction motor and determine the parameters of its equivalent circuits.
5	Draw the circle diagram and compute the following (i) Max. Torque (ii) Current (iii) slips (iv) p. f. (v) Efficiency.
6	Speed control of 3- Φ Induction Motor.
7	To plot the O.C.C. & S.C.C. of an alternator.
8	To determine Zs, Xd and Xq by slip test, Zero power factor (ZPF)/ Potier reactance method.
9	To determine the voltage regulation of a 3-phase alternator by direct loading.
10	To determine the voltage regulation of a 3-phase alternator by synchronous impedance method.
11	To study effect of variation of field current upon the stator current and power factor of synchronous motor andPlot V-Curve and inverted V-Curve of synchronous motor for different values of loads.
12	To synchronize an alternator across the infinite bus and control load sharing.

TEXT/REFERENCE BOOKS

1. Electrical Machines Book by A.V.Bakshi U.A.Bakshi A.P.Godse
2. Theory & Performance of Electrical Machines Book by J. B. Gupta.

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