

Module 1

Chapter 1 : Single Phase Transformers 1-1 to 1-54

Syllabus : Review of working principle, EMF equation and Equivalent circuit, Phasor diagram (Resistive, Inductive and Capacitive load), Voltage regulation, Losses and Efficiency, Condition for maximum efficiency, **Parallel operation :** No load operation, **On load operation :** Equal voltage operation and Unequal voltage operation, **Testing of transformer :** OC and SC test, Sumpner's Test.

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Module 3

Chapter 3 : Three Phase Transformer 3-1 to 3-36

Syllabus : Constructional details, Principle of operation, Connections and Phasor groups, Parallel operation, Excitation phenomenon in transformers, Harmonics in three phase transformers, Suppression of harmonics, Oscillating neutral phenomenon, Switching in transient phenomenon, Open delta or V- connection, Three phase to two phase conversion (Scott connection).

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Module 4

Chapter 4 : Three Phase Induction Motors (Part-1)

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Syllabus : Review of constructional details and Principle of operation, Slip, Rotor emf and Frequency, Current and Power, Power stages, Phasor diagram, Equivalent circuit, Torque-speed characteristics in braking, motoring and Generating regions, Losses and Efficiency, No load and blocked rotor test, Circle diagram, Applications.

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Module 6

Chapter 6 : Single Phase Induction Motors 6-1 to 6-18

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