

## STUDY PLAN

| Ashish SIR : Electrical Machine |                                                              |               | Ashish Sir : Power Systems  |                                                                         |                 |
|---------------------------------|--------------------------------------------------------------|---------------|-----------------------------|-------------------------------------------------------------------------|-----------------|
| Date                            | Topic                                                        | Timing        | Date                        | Topic                                                                   | Timing          |
| Recorded                        | Introduction to Electrical Machines                          | 2:30PM 3:30PM | Monday, January 5, 2026     | Introduction to Power Systems                                           | 5:00PM - 6:00PM |
| Recorded                        | Basic Concepts of Magnetic Materials                         | 2:30PM 3:30PM | Tuesday, January 6, 2026    | Generation (Thermal Power plant, Hydro Power Plant)                     | 5:00PM - 6:00PM |
| Recorded                        | Basic concepts of Rotating Machines                          | 2:30PM 3:30PM | Wednesday, January 7, 2026  | Generation (Nuclear Power Plant), Renewable & Non renewable power plant | 5:00PM - 6:00PM |
| Recorded                        | Working of DC Generators                                     | 2:30PM 3:30PM | Thursday, January 8, 2026   | Economic Load factors (Load factor, capacity factor etc.)               | 5:00PM - 6:00PM |
| Recorded                        | Construction of DC Machines                                  | 2:30PM 3:30PM | Friday, January 9, 2026     | Per unit method Part-1                                                  | 5:00PM - 6:00PM |
| Recorded                        | Commutator & Types of Windings                               | 2:30PM 3:30PM | Monday, January 12, 2026    | Per unit method Part-2                                                  | 5:00PM - 6:00PM |
| Recorded                        | Emf Equation of DC Generators                                | 2:30PM 3:30PM | Tuesday, January 13, 2026   | Question practice Session                                               | 5:00PM - 6:00PM |
| Recorded                        | Type of DC Generators                                        | 2:30PM 3:30PM | Wednesday, January 14, 2026 | Power factor improvement Part-1                                         | 5:00PM - 6:00PM |
| Recorded                        | Questions on DC Generators                                   | 2:30PM 3:30PM | Thursday, January 15, 2026  | Power factor improvement Part-2                                         | 5:00PM - 6:00PM |
| Recorded                        | Armature reaction of DC Generators-1                         | 2:30PM 3:30PM | Friday, January 16, 2026    | Power factor improvement Part-3                                         | 5:00PM - 6:00PM |
| Recorded                        | Armature reaction of DC Generators-2                         | 2:30PM 3:30PM | Monday, January 19, 2026    | Power factor improvement Part - 4                                       | 5:00PM - 6:00PM |
| Tuesday, November 25, 2025      | Commutation in DC Machines                                   | 2:30PM 3:30PM | Tuesday, January 20, 2026   | Question practice Session                                               | 5:00PM - 6:00PM |
| Wednesday, November 26, 2025    | Methods of improving commutations                            | 2:30PM 3:30PM | Wednesday, January 21, 2026 | Transmission line parameters Part-1                                     | 5:00PM - 6:00PM |
| Thursday, November 27, 2025     | Characteristics of DC Generators                             | 2:30PM 3:30PM | Thursday, January 22, 2026  | Transmission line parameters Part-2                                     | 5:00PM - 6:00PM |
| Friday, November 28, 2025       | Basic Principle of Motor                                     | 2:30PM 3:30PM | Friday, January 23, 2026    | Transmission line parameters Part-3                                     | 5:00PM - 6:00PM |
| Monday, December 1, 2025        | Torque Equation of DC Motors                                 | 2:30PM 3:30PM | Monday, January 26, 2026    | Short circuit of fault analysis Part - 1                                | 5:00PM - 6:00PM |
| Tuesday, December 2, 2025       | Speed control of DC Motors                                   | 2:30PM 3:30PM | Tuesday, January 27, 2026   | Short circuit of fault analysis Part - 2                                | 5:00PM - 6:00PM |
| Wednesday, December 3, 2025     | Starting and Braking methods of DC Motors                    | 2:30PM 3:30PM | Wednesday, January 28, 2026 | Question practice Session                                               | 5:00PM - 6:00PM |
| Thursday, December 4, 2025      | Efficiency and testing methods of DC Motors                  | 2:30PM 3:30PM | Thursday, January 29, 2026  | Short circuit of fault analysis Part - 3                                | 5:00PM - 6:00PM |
| Friday, December 5, 2025        | Basics of Transformers                                       | 2:30PM 3:30PM | Friday, January 30, 2026    | Power system stability Part - 1                                         | 5:00PM - 6:00PM |
| Monday, December 8, 2025        | Construction of transformers & Emf Equation of transformers, | 2:30PM 3:30PM | Monday, February 2, 2026    | Power system stability Part - 2                                         | 5:00PM - 6:00PM |
| Tuesday, December 9, 2025       | Equivalent circuit, O.C.& S.C. Tests                         | 2:30PM 3:30PM | Tuesday, February 3, 2026   | Switchgear and protection Part-1                                        | 5:00PM - 6:00PM |

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| Wednesday, December 10, 2025 | Voltage regulation of transformers, Losses and efficiency of transformers                                  | 2:30PM 3:30PM     | Wednesday, February 4, 2026            | Switchgear and protection Part-2                                  | 5:00PM - 6:00PM |
| Thursday, December 11, 2025  | 3 Phase transformers, Parallel operation of transformers                                                   | 2:30PM 3:30PM     | Thursday, February 5, 2026             | Switchgear and protection Part-3                                  | 5:00PM - 6:00PM |
| Friday, December 12, 2025    | Construction & Working of 3-Phase Induction Machines                                                       | 2:30PM 3:30PM     | Friday, February 6, 2026               | Switchgear and protection Part-4                                  | 5:00PM - 6:00PM |
| Monday, December 15, 2025    | Working & Equivalent Circuit of 3-Phase Induction Machines                                                 | 2:30PM 3:30PM     | Monday, February 9, 2026               | Switchgear and protection Part-5                                  | 5:00PM - 6:00PM |
| Tuesday, December 16, 2025   | Torque Equation of 3-Phase induction Machines                                                              | 2:30PM 3:30PM     | Tuesday, February 10, 2026             | Question practice Session                                         | 5:00PM - 6:00PM |
| Wednesday, December 17, 2025 | Torque slip characteristics of 3-phase induction Motors                                                    | 2:30PM 3:30PM     | Wednesday, February 11, 2026           | Cables, insulators Part -1                                        | 5:00PM - 6:00PM |
| Thursday, December 18, 2025  | Starters & Braking methods of 3-Phase induction machines                                                   | 2:30PM 3:30PM     | Thursday, February 12, 2026            | Cables, insulators Part -2                                        | 5:00PM - 6:00PM |
| Friday, December 19, 2025    | Speed control of 3-Phase induction motors                                                                  | 2:30PM 3:30PM     | Friday, February 13, 2026              | Circuit Breakers Part -1                                          | 5:00PM - 6:00PM |
| Monday, December 22, 2025    | Losses, efficiency, Cogging, Crawling of 3-Phase induction Motors                                          | 2:30PM 3:30PM     | Monday, February 16, 2026              | Circuit Breakers Part -2                                          | 5:00PM - 6:00PM |
| Tuesday, December 23, 2025   | Construction and working of 1-Phase induction motors                                                       | 2:30PM 3:30PM     | Tuesday, February 17, 2026             | Question practice Session                                         | 5:00PM - 6:00PM |
| Wednesday, December 24, 2025 | Split phase Induction Motors, Capacitor start, Capacitor start capacitor run, Shaded pole Induction Motors | 2:30PM 3:30PM     | <b>Measurement and instrumentation</b> |                                                                   |                 |
| Thursday, December 25, 2025  | Hysteresis, Switched Reluctance motors, stepper motors                                                     | 2:30PM 3:30PM     | <b>Date</b>                            | <b>Topic</b>                                                      | <b>Timing</b>   |
| Friday, December 26, 2025    | Construction & Working of 3-phase Synchronous Machines                                                     | 2:30PM 3:30PM     | Recorded                               | Introduction to Electrical & Electronics Engineering Measurements | Recorded        |
| Monday, December 29, 2025    | Armature reaction of 3-Phase synchronous generators at unity, Lagging pf & Leading pf                      | 2:30PM 3:30PM     | Recorded                               | Method of Measurement and Static Characteristics of Instruments   | Recorded        |
| Tuesday, December 30, 2025   | Voltage Regulation of 3-Phase Synchronous generators                                                       | 2:30PM 3:30PM     | Recorded                               | Static Characteristics of Instruments                             | Recorded        |
| Wednesday, December 31, 2025 | Power flow, Synchronous condenser & important curves in synchronous machines in Synchronous Machines       | 2:30PM 3:30PM     | Recorded                               | Dynamic Characteristics of Instruments                            | Recorded        |
| Thursday, January 1, 2026    | Parallel Operation of Synchronous Machines                                                                 | 2:30PM 3:30PM     | Recorded                               | Error Analysis Part-1                                             | Recorded        |
| Friday, January 2, 2026      | Working of 3-Phase synchronous motors                                                                      | 2:30PM 3:30PM     | Recorded                               | Error Analysis Part-2                                             | Recorded        |
| Monday, January 5, 2026      | Starting methods of synchronous motors, Synchronizing coefficient                                          | 2:30PM 3:30PM     | Recorded                               | Error Analysis Part-3                                             | Recorded        |
| Tuesday, January 6, 2026     | Testings in Synchronous Machines                                                                           | 2:30PM 3:30PM     | Recorded                               | Types of Dampings and torques Part-1                              | Recorded        |
| <b>Ashish SIR : UEE</b>      |                                                                                                            |                   | Recorded                               | Types of Dampings and torques Part-2                              | Recorded        |
|                              |                                                                                                            |                   | Recorded                               | PMMC Part-1                                                       | Recorded        |
|                              |                                                                                                            |                   | Recorded                               | PMMC Part-2                                                       | Recorded        |
| <b>Date</b>                  | <b>Topic</b>                                                                                               | <b>Timing</b>     | Recorded                               | Rectifier type instruments                                        | Recorded        |
| Monday, December 22, 2025    | Type of Motor and Characteristics                                                                          | 5:00 PM - 6:00 PM | Recorded                               | Ratio Meter & Megger                                              | Recorded        |
| Tuesday, December 23, 2025   | Type of loads                                                                                              | 5:00 PM - 6:00 PM | Recorded                               | Moving iron type instruments -1                                   | Recorded        |

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| Wednesday, December 24, 2025       | System of electric traction and track electrification                               | 5:00 PM - 6:00 PM | Recorded | Moving iron type instruments -2                 | Recorded |
| Thursday, December 25, 2025        | Speed-time curves for different services                                            | 5:00 PM - 6:00 PM | Recorded | Power factor meter, flux meter, Frequency meter | Recorded |
| Friday, December 26, 2025          | Calculation of various quantities of Electrical Traction                            | 5:00 PM - 6:00 PM | Recorded | Measurement of Power-1                          | Recorded |
| Monday, December 29, 2025          | Methods of Electrical Heating                                                       | 5:00 PM - 6:00 PM | Recorded | Measurement of Power-2                          | Recorded |
| Tuesday, December 30, 2025         | Methods of Electrical Welding                                                       | 5:00 PM - 6:00 PM | Recorded | Energy meter -1                                 | Recorded |
| Wednesday, December 31, 2025       | Introduction and terms used in Illumination                                         | 5:00 PM - 6:00 PM | Recorded | Energy meter -2                                 | Recorded |
| Thursday, January 1, 2026          | Discharge Lamps, MV and SV Lamps                                                    | 5:00 PM - 6:00 PM | Recorded | Instrument transformers Part-1                  | Recorded |
| Friday, January 2, 2026            | Basic Principle of Light Control , Types and design of lightning and flood lighting | 5:00 PM - 6:00 PM | Recorded | Instrument transformers Part-2                  | Recorded |
| END OF SUBJECT                     |                                                                                     |                   | Recorded | CRO - 1                                         | Recorded |
| <b>Ashish Sir : Control system</b> |                                                                                     |                   | Recorded | CRO - 2                                         | Recorded |
|                                    |                                                                                     |                   | Recorded | AC bridges=1                                    | Recorded |
|                                    |                                                                                     |                   | Recorded | AC bridges=2                                    | Recorded |
|                                    |                                                                                     |                   | Recorded | Transducers Part-1                              | Recorded |
| <b>Date</b>                        | <b>Topic</b>                                                                        | <b>Timing</b>     | Recorded | Transducers Part-2                              | Recorded |
| Recorded                           | Basic of Control System                                                             | Recorded          | Recorded |                                                 |          |
| Recorded                           | Transfer Function Analysis of AC and DC servomotor                                  | Recorded          |          |                                                 |          |
| Recorded                           | Control system Representation                                                       | Recorded          |          |                                                 |          |
| Recorded                           | Time Response Analysis Part-1                                                       | Recorded          |          |                                                 |          |
| Recorded                           | Time Response Analysis Part-2                                                       | Recorded          |          |                                                 |          |
| Recorded                           | Routh Hurwitz Criterion, Root Locus                                                 | Recorded          |          |                                                 |          |
| Recorded                           | Bode Plotting using semi log graph paper                                            | Recorded          |          |                                                 |          |
| Recorded                           | Compensator                                                                         | Recorded          |          |                                                 |          |
| Recorded                           | Controller                                                                          | Recorded          |          |                                                 |          |