

## STUDY PLAN

| Ashish SIR : Electrical Machine |                                             |               | Ashish SIR: Basic Electronics |                                          |                 |
|---------------------------------|---------------------------------------------|---------------|-------------------------------|------------------------------------------|-----------------|
| Date                            | Topic                                       | Timing        | Date                          | Topic                                    | Timing          |
| Recorded                        | Introduction to Electrical Machines         | 2:30PM 3:30PM | Wednesday, December 10, 2025  | Introduction to Basic Electronics        | 5:00PM - 6:00PM |
| Recorded                        | Basic Concepts of Magnetic Materials        | 2:30PM 3:30PM | Thursday, December 11, 2025   | Basics of Semiconductor Materials Part-1 | 5:00PM - 6:00PM |
| Recorded                        | Basic concepts of Rotating Machines         | 2:30PM 3:30PM | Friday, December 12, 2025     | Basics of Semiconductor Materials Part-2 | 5:00PM - 6:00PM |
| Recorded                        | Working of DC Generators                    | 2:30PM 3:30PM | Monday, December 15, 2025     | Semiconductor Physics Part-1             | 5:00PM - 6:00PM |
| Recorded                        | Construction of DC Machines                 | 2:30PM 3:30PM | Tuesday, December 16, 2025    | Semiconductor Physics Part-2             | 5:00PM - 6:00PM |
| Recorded                        | Commutator & Types of Windings              | 2:30PM 3:30PM | Wednesday, December 17, 2025  | PN Junction Diode Part-1                 | 5:00PM - 6:00PM |
| Recorded                        | Emf Equation of DC Generators               | 2:30PM 3:30PM | Thursday, December 18, 2025   | PN Junction Diode Part-2                 | 5:00PM - 6:00PM |
| Recorded                        | Type of DC Generators                       | 2:30PM 3:30PM | Friday, December 19, 2025     | Zener Diode Part -1                      | 5:00PM - 6:00PM |
| Recorded                        | Questions on DC Generators                  | 2:30PM 3:30PM | Monday, December 22, 2025     | Zener Diode Part -2                      | 5:00PM - 6:00PM |
| Recorded                        | Armature reaction of DC Generators-1        | 2:30PM 3:30PM | Tuesday, December 23, 2025    | Tunnel diode, LED                        | 5:00PM - 6:00PM |
| Recorded                        | Armature reaction of DC Generators-2        | 2:30PM 3:30PM | Wednesday, December 24, 2025  | PhotoDiode, Shottcky Diode               | 5:00PM - 6:00PM |
| Recorded                        | Commutation in DC Machines                  | 2:30PM 3:30PM | Thursday, December 25, 2025   | BJT Part-1                               | 5:00PM - 6:00PM |
| Recorded                        | Methods of improving commutations           | 2:30PM 3:30PM | Friday, December 26, 2025     | BJT Part-2                               | 5:00PM - 6:00PM |
| Recorded                        | Characteristics of DC Generators            | 2:30PM 3:30PM | Monday, December 29, 2025     | BJT Part-3                               | 5:00PM - 6:00PM |
| Recorded                        | Basic Principle of Motor                    | 2:30PM 3:30PM | Tuesday, December 30, 2025    | BJT Part-4                               | 5:00PM - 6:00PM |
| Recorded                        | Torque Equation of DC Motors                | 2:30PM 3:30PM | Wednesday, December 31, 2025  | BJT Part-5                               | 5:00PM - 6:00PM |
| Recorded                        | Speed control of DC Motors                  | 2:30PM 3:30PM | Thursday, January 1, 2026     | BJT Part-6                               | 5:00PM - 6:00PM |
| Recorded                        | Starting and Braking methods of DC Motors   | 2:30PM 3:30PM | Friday, January 2, 2026       | BJT Part-7                               | 5:00PM - 6:00PM |
| Recorded                        | Efficiency and testing methods of DC Motors | 2:30PM 3:30PM | Monday, January 5, 2026       | FeedBack Amplifier                       | 5:00PM - 6:00PM |
| Recorded                        | Basics of Transformers                      | 2:30PM 3:30PM | Tuesday, January 6, 2026      | Power amplifier                          | 5:00PM - 6:00PM |

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| Recorded                     | Construction of transformers & Emf Equation of transformers,                                               | 2:30PM 3:30PM | Wednesday, January 7, 2026  | FET introduction and working               | 5:00PM - 6:00PM |
| Recorded                     | Equivalent circuit, O.C. & S.C. Tests                                                                      | 2:30PM 3:30PM | Thursday, January 8, 2026   | MCQs on FET                                | 5:00PM - 6:00PM |
| Wednesday, December 10, 2025 | Voltage regulation of transformers, Losses and efficiency of transformers                                  | 2:30PM 3:30PM | Friday, January 9, 2026     | MOSFET introduction and working            | 5:00PM - 6:00PM |
| Thursday, December 11, 2025  | 3 Phase transformers, Parallel operation of transformers                                                   | 2:30PM 3:30PM | Monday, January 12, 2026    | Op-amp Part-1                              | 5:00PM - 6:00PM |
| Friday, December 12, 2025    | Construction & Working of 3-Phase Induction Machines                                                       | 2:30PM 3:30PM | Tuesday, January 13, 2026   | Op-amp Part-2                              | 5:00PM - 6:00PM |
| Monday, December 15, 2025    | Working & Equivalent Circuit of 3-Phase Induction Machines                                                 | 2:30PM 3:30PM | Wednesday, January 14, 2026 | Op-amp Part-3                              | 5:00PM - 6:00PM |
| Tuesday, December 16, 2025   | Torque Equation of 3-Phase induction Machines                                                              | 2:30PM 3:30PM | Thursday, January 15, 2026  | Number system Part-1                       | 5:00PM - 6:00PM |
| Wednesday, December 17, 2025 | Torque slip characteristics of 3-phase induction Motors                                                    | 2:30PM 3:30PM | Friday, January 16, 2026    | Number system Part-2                       | 5:00PM - 6:00PM |
| Thursday, December 18, 2025  | Starters & Braking methods of 3-Phase induction machines                                                   | 2:30PM 3:30PM | Monday, January 19, 2026    | Boolean algebra                            | 5:00PM - 6:00PM |
| Friday, December 19, 2025    | Speed control of 3-Phase induction motors                                                                  | 2:30PM 3:30PM | Tuesday, January 20, 2026   | Logic Gates                                | 5:00PM - 6:00PM |
| Monday, December 22, 2025    | Losses, efficiency, Cogging, Crawling of 3-Phase induction Motors                                          | 2:30PM 3:30PM | Wednesday, January 21, 2026 | Basics of Power Electronics Part-1         | 5:00PM - 6:00PM |
| Tuesday, December 23, 2025   | Construction and working of 1-Phase induction motors                                                       | 2:30PM 3:30PM | Thursday, January 22, 2026  | Basics of Power Electronics Part-2         | 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 | Friday, January 23, 2026    | SCR Part-1                                 | 5:00PM - 6:00PM |
| Thursday, December 25, 2025  | Hysteresis, Switched Reluctance motors, stepper motors                                                     | 2:30PM 3:30PM | Monday, January 26, 2026    | SCR Part-2                                 | 5:00PM - 6:00PM |
| Friday, December 26, 2025    | Construction & Working of 3-phase Synchronous Machines                                                     | 2:30PM 3:30PM | Tuesday, January 27, 2026   | Types of Switches and their working Part-1 | 5:00PM - 6:00PM |
| Monday, December 29, 2025    | Armature reaction of 3-Phase synchronous generators at unity, Lagging pf & Leading pf                      | 2:30PM 3:30PM | Wednesday, January 28, 2026 | Types of Switches and their working Part-2 | 5:00PM - 6:00PM |
| Tuesday, December 30, 2025   | Voltage Regulation of 3-Phase Synchronous generators                                                       | 2:30PM 3:30PM | Thursday, January 29, 2026  | Types of Switches and their working Part-3 | 5:00PM - 6:00PM |

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| Wednesday, December 31, 2025 | Power flow, Synchronous condenser & important curves in synchronous machines in Synchronous Machines | 2:30PM 3:30PM     | Friday, January 30, 2026          | Miscellaneous                                                           | 5:00PM - 6:00PM |
| Thursday, January 1, 2026    | Parallel Operation of Synchronous Machines                                                           | 2:30PM 3:30PM     | <b>Ashish Sir : Power Systems</b> |                                                                         |                 |
| Friday, January 2, 2026      | Working of 3-Phase synchronous motors                                                                | 2:30PM 3:30PM     | <b>Date</b>                       | <b>Topic</b>                                                            | <b>Timing</b>   |
| Monday, January 5, 2026      | Starting methods of synchronous motors, Synchronizing coefficient                                    | 2:30PM 3:30PM     | Monday, January 5, 2026           | Introduction to Power Systems                                           | 5:00PM - 6:00PM |
| Tuesday, January 6, 2026     | Testings in Synchronous Machines                                                                     | 2:30PM 3:30PM     | Tuesday, January 6, 2026          | Generation (Thermal Power plant, Hydro Power Plant)                     | 5:00PM - 6:00PM |
| <b>Ashish SIR : UEE</b>      |                                                                                                      |                   | Wednesday, January 7, 2026        | Generation (Nuclear Power Plant), Renewable & Non renewable power plant | 5:00PM - 6:00PM |
|                              |                                                                                                      |                   | Thursday, January 8, 2026         | Economic Load factors (Load factor, capacity factor etc.)               | 5:00PM - 6:00PM |
|                              |                                                                                                      |                   | Friday, January 9, 2026           | Per unit method Part-1                                                  | 5:00PM - 6:00PM |
| <b>Date</b>                  | <b>Topic</b>                                                                                         | <b>Timing</b>     | Monday, January 12, 2026          | Per unit method Part-2                                                  | 5:00PM - 6:00PM |
| Monday, December 22, 2025    | Type of Motor and Characteristics                                                                    | 5:00 PM - 6:00 PM | Tuesday, January 13, 2026         | Question practice Session                                               | 5:00PM - 6:00PM |
| Tuesday, December 23, 2025   | Type of loads                                                                                        | 5:00 PM - 6:00 PM | Wednesday, January 14, 2026       | Power factor improvement Part-1                                         | 5:00PM - 6:00PM |
| Wednesday, December 24, 2025 | System of electric traction and track electrification                                                | 5:00 PM - 6:00 PM | Thursday, January 15, 2026        | Power factor improvement Part-2                                         | 5:00PM - 6:00PM |
| Thursday, December 25, 2025  | Speed-time curves for different services                                                             | 5:00 PM - 6:00 PM | Friday, January 16, 2026          | Power factor improvement Part-3                                         | 5:00PM - 6:00PM |
| Friday, December 26, 2025    | Calculation of various quantities of Electrical Traction                                             | 5:00 PM - 6:00 PM | Monday, January 19, 2026          | Power factor improvement Part - 4                                       | 5:00PM - 6:00PM |
| Monday, December 29, 2025    | Methods of Electrical Heating                                                                        | 5:00 PM - 6:00 PM | Tuesday, January 20, 2026         | Question practice Session                                               | 5:00PM - 6:00PM |
| Tuesday, December 30, 2025   | Methods of Electrical Welding                                                                        | 5:00 PM - 6:00 PM | Wednesday, January 21, 2026       | Transmission line parameters Part-1                                     | 5:00PM - 6:00PM |
| Wednesday, December 31, 2025 | Introduction and terms used in Illumination                                                          | 5:00 PM - 6:00 PM | Thursday, January 22, 2026        | Transmission line parameters Part-2                                     | 5:00PM - 6:00PM |
| Thursday, January 1, 2026    | Discharge Lamps, MV and SV Lamps                                                                     | 5:00 PM - 6:00 PM | Friday, January 23, 2026          | Transmission line parameters Part-3                                     | 5:00PM - 6:00PM |
| Friday, January 2, 2026      | Basic Principle of Light Control , Types and design of lightning and flood lighting                  | 5:00 PM - 6:00 PM | Monday, January 26, 2026          | Short circuit of fault analysis Part - 1                                | 5:00PM - 6:00PM |
| <b>END OF SUBJECT</b>        |                                                                                                      |                   | Tuesday, January 27, 2026         | Short circuit of fault analysis Part - 2                                | 5:00PM - 6:00PM |

| Ashish Sir : Control system |                                                           |          | Wednesday, January 28, 2026     | Question practice Session                                         | 5:00PM - 6:00PM |
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|                             |                                                           |          | Thursday, January 29, 2026      | Short circuit of fault analysis Part -3                           | 5:00PM - 6:00PM |
|                             |                                                           |          | Friday, January 30, 2026        | Power system stability Part - 1                                   | 5:00PM - 6:00PM |
| Date                        | Topic                                                     | Timing   | Monday, February 2, 2026        | Power system stability Part - 2                                   | 5:00PM - 6:00PM |
| Recorded                    | Basic of Control System                                   | Recorded | Tuesday, February 3, 2026       | Switchgear and protection Part-1                                  | 5:00PM - 6:00PM |
| Recorded                    | Transfer Function Analysis of AC and DC servomotor        | Recorded | Wednesday, February 4, 2026     | Switchgear and protection Part-2                                  | 5:00PM - 6:00PM |
| Recorded                    | Control system Representation                             | Recorded | Thursday, February 5, 2026      | Switchgear and protection Part-3                                  | 5:00PM - 6:00PM |
| Recorded                    | Time Response Analysis Part-1                             | Recorded | Friday, February 6, 2026        | Switchgear and protection Part-4                                  | 5:00PM - 6:00PM |
| Recorded                    | Time Response Analysis Part-2                             | Recorded | Monday, February 9, 2026        | Switchgear and protection Part-5                                  | 5:00PM - 6:00PM |
| Recorded                    | Routh Hurwitz Criterion, Root Locus                       | Recorded | Tuesday, February 10, 2026      | Question practice Session                                         | 5:00PM - 6:00PM |
| Recorded                    | Bode Plotting using semi log graph paper                  | Recorded | Wednesday, February 11, 2026    | Cables, insulators Part -1                                        | 5:00PM - 6:00PM |
| Recorded                    | Compensator                                               | Recorded | Thursday, February 12, 2026     | Cables, insulators Part -2                                        | 5:00PM - 6:00PM |
| Recorded                    | Controller                                                | Recorded | Friday, February 13, 2026       | Circuit Breakers Part -1                                          | 5:00PM - 6:00PM |
| Ashish Sir - Network Theory |                                                           |          | Monday, February 16, 2026       | Circuit Breakers Part -2                                          | 5:00PM - 6:00PM |
| Date                        | Topic                                                     | Timing   | Tuesday, February 17, 2026      | Question practice Session                                         | 5:00PM - 6:00PM |
| Recorded                    | Electric Potential                                        | Recorded | Measurement and instrumentation |                                                                   |                 |
| Recorded                    | Ohms law, Concept of Resistance                           | Recorded | Date                            | Topic                                                             | Timing          |
| Recorded                    | Types Of Circuit Elements                                 | Recorded | Recorded                        | Introduction to Electrical & Electronics Engineering Measurements | Recorded        |
| Recorded                    | Concept of Inductor                                       | Recorded | Recorded                        | Error Analysis Part-1                                             | Recorded        |
| Recorded                    | Concept of Capacitance & Laplace transforms               | Recorded | Recorded                        | Error Analysis Part-2                                             | Recorded        |
| Recorded                    | Some Functions & Their Laplace Transforms                 | Recorded | Recorded                        | Types of Dampings and torques                                     | Recorded        |
| Recorded                    | Resistance in Series and Parallel & Star Delta conversion | Recorded | Recorded                        | PMMC                                                              | Recorded        |
| Recorded                    | Capacitance in Series and Parallel                        | Recorded | Recorded                        | Rectifier type instruments                                        | Recorded        |
| Recorded                    | KVL and KCL                                               | Recorded | Recorded                        | Moving iron type instruments -1                                   | Recorded        |

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| Recorded | Question Practice Session                                                              | Recorded | Recorded | Moving iron type instruments -2                 | Recorded |
| Recorded | Questions Practice Session                                                             | Recorded | Recorded |                                                 | Recorded |
| Recorded | Network Theorem                                                                        | Recorded | Recorded | Power factor meter, flux meter, Frequency meter | Recorded |
| Recorded | (Superposition Theorem)                                                                | Recorded | Recorded | Measurement of Power-1                          | Recorded |
| Recorded | Thevenin's, Nortons Theorem                                                            | Recorded | Recorded | Measurement of Power-2                          | Recorded |
| Recorded | Maximum Power Transfer Theorem                                                         | Recorded | Recorded | Energy meter -1                                 | Recorded |
| Recorded | Tellegen's, Milliman's & Reciprocity Theorem                                           | Recorded | Recorded | Energy meter -2                                 | Recorded |
| Recorded | AC Fundamentals                                                                        | Recorded | Recorded | Instrument transformers Part-1                  | Recorded |
| Recorded | Series Resonance                                                                       | Recorded | Recorded | Instrument transformers Part-2                  | Recorded |
| Recorded | Parallel Resonance                                                                     | Recorded | Recorded | CRO - 1                                         | Recorded |
| Recorded | Performance Parameters of Series and Parallel Resonance                                | Recorded | Recorded | CRO - 2                                         | Recorded |
| Recorded | Average & RMS values of difference waveforms                                           | Recorded | Recorded | AC bridges 1                                    | Recorded |
| Recorded | Two Port Networks & Graph Theory                                                       | Recorded | Recorded | AC bridges 2                                    | Recorded |
| Recorded | Graph Theory and Questions                                                             | Recorded |          |                                                 |          |
| Recorded | Poly phase Network                                                                     | Recorded |          |                                                 |          |
| Recorded | Poly phase Network                                                                     | Recorded |          |                                                 |          |
| Recorded | Power Triangle, impedance Triangle, charging and discharging of Inductor and Capacitor | Recorded |          |                                                 |          |