

## Online Course @ SCORE ACADEMY (Version 4.0)

### About the course

This Online Course focussing on **KSEB / KPSC / PWD Assistant Engineer, Electrical Inspectorate, SSC JE, KSEB Sub Engineer** will include “**FOUNDATION COURSE**” + coverage of entire syllabus relevant for **all B.Tech & Diploma Level exams**

**All Courses @ SCORE ACADEMY are handled @ AE/B.Tech Level**  
[Additional Theory sessions for Diploma Level exams are included within this course](#)

As in regular classroom programme the focus will be on concept based study and will include video sessions, problem solving sessions & (classroom sessions after the covid-related restrictions are removed)

### Features of Online course

1. Pre-Recorded video sessions will be available for each topic
2. The video sessions will be available in **our dedicated video platform + SCORE E3 Learning Mobile APP** + question paper discussion + Screen Recorded Sessions as per requirement.
3. Module-wise Preparation
4. **Module-wise FEE payment**
5. Detailed course + **Foundation program**
6. Extensive problem solving & discussions
7. Analysis and solving of 3-Level problems
8. Surprise Tests+ Part Tests + 3-Level Test series
9. **Exam specific Module sessions**
10. Special sessions for individual doubt clearing
11. Course will be facilitated by **subject matter expert faculties** for each module
12. All classes by **Rank Holders** in multiple KPSC,SSC,RRB & PSUs

**How to Join the Course** All interested aspirants are requested to fill in their details including email id. and contact number in the [Google form](#) shared

1. Interested students may please send in the filled up [Google form](#)
2. The module-wise course hours + No. of sessions + module wise fees will be updated to interested aspirants

### Course fee

1. **New aspirants** who wish to join the online course can pay the fees **module wise**. (module wise fee details will be updated)
2. An affordable **Module-wise fee** will be set up depending upon the number of course hours and faculty

# SCORE ACADEMY

**FOUNDATION LEVEL classes included in this course will include topics/concepts as required for KSEB, KPSC/ PWD Assistant Engineer, Electrical Inspectorate, Sub Engineer, Tradesman, Junior Instructor, Overseer, SSC JE Electrician exams.**

*The Course fee is structured “**module wise**” so that our beloved aspirants can easily afford the course and make the best outcome of it. We the team @ **SCORE** are most committed to provide the best comprehensive and effective course to all serious aspirants.*

## Module-wise Schedule

<b>Course Plan + Test Analysis</b>	<h3 style="margin: 0;">Basics of Electrical</h3> <h3 style="margin: 0;">Module-SE1</h3> <h3 style="margin: 0; color: red;">Scoring Level- 3</h3>
<b>Complete study of Electrical Basics with 3-Level question discussion</b>	<b>Electrical Circuits and Networks</b>
	Fundamentals + Basics concepts
	Concept of Resistance and <b>Detailed analysis of DC circuits</b>
	Network Solving techniques
	Network Theorems
	Two- Port Networks
	<b>Part -Test 1.1</b>
	<b>AC Fundamentals - Detailed study</b>
	Basics of AC + AC Power Calculations
	Resonance in R- L- C circuits
	Generation of poly phase voltage
	Polyphase Networks + Short cut problem solving techniques
	Three - Phase Power Calculations
	<b>Part -Test 1.2</b>
	<b>Electromagnetism Basics + Magnetic circuit</b>
	Magnetism
	Electrostatics
	Electrical Material Science - <b>Detailed study</b>
<b>Part -Test 1.3</b>	
<b>Test Discussion (No. of sessions will depend on student response) Assistant Engineer + GATE + ESE + SSC JE + State PSC level question discussion</b>	
<h2 style="margin: 0;">Combined 3-Level Subject Tests</h2>	

*Questions discussed in class/Tests include GATE + ESE + SSC JE + KPSC + Other state PSC exams + Concept Building Questions (CBQs)*

**Electrical Machines **Part -1****  
**Module-SE2**  
**Scoring Level- 3**

Course Plan +  
 Test Analysis

	<b>DC Machines</b>
<b>DC Machines</b>	Rotating Machine Basics
	Generators & Motors : Principle and working
	Construction & Characteristics
	Types of motors
	Methods of Speed Control
	Starting of DC motors
	Testing of DC motors
	<b>Part –Test 2.1</b>
	<b>Transformers</b>
<b>Transformers</b>	Transformer Basics
	Principle and working
	Construction
	Application based analysis & Special Purpose Transformers
	Testing of Transformers
	<b>Part -Test 2.2</b>
	<b>Electrical Heating &amp; Welding</b>
<b>Utilization of Electric Power</b>	Electric heating and welding
	Electric Heating-Types
	Electric Welding-Types
	Generators and Transformers
	<b>Part -Test 2.3</b>
	<b>Test Discussion (No. of sessions will depend on student response) Assistant Engineer + SUB Engineer + JE level question discussions</b>
<b>Combined 3-Level Subject Tests</b>	

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**Electrical Machines Part -2**  
**Module-SE2**  
**Scoring Level- 3**

Course Plan +  
 Test Analysis

**AC Rotating Machines**

**Synchronous &  
 Induction Machines**

- Synchronous generator
- Synchronous Motor
- Complete Analysis of Synchronous Machines
- Complete analysis on Basics of AC machines
- Three Phase Induction Machines
- Single Phase Induction Motors
- Fractional Horse Power Motors – Application based analysis

**Part -Test 2.4**

**Electrical Drives in Industry**

**Applications of  
 Electrical Machines**

- Classification of Electric Drives
- Electric Traction
- Traction motors
- Application based analysis
- Miscellaneous Topics from AC machines

**Part -Test 2.5**

**Miscellaneous Topics from Power systems/ Substation / Machines**

**Important  
 Miscellaneous  
 Topics**

- Inter-related Topics from**
- Power systems + Electrical Machines + Power Electronics
- Relevant for AE Level , Diploma Level Exams

**Part -Test 2.6**

Test Discussion (No. of sessions will depend on student response)  
 Assistant Engineer + SUB Engineer + JE level question discussions

**Combined 3-Level Subject Tests**

<p><b>Course Plan + Test Analysis</b></p>	<p align="center"><b>Electrical Measurements + Design &amp; Wiring Module-SE3 Scoring Level- 2</b></p>
<p><b>Electrical Measurements</b></p>	<p align="center"><b>Electrical Measurements</b></p> <p>Theory of Measuring Instrument ( <b>Detailed Analysis</b> )</p> <p>Measurement of Power and Energy</p> <p>Measurement of R L C</p> <p>Bridges ( AC &amp; DC)</p> <p>Commercial Measuring Instruments</p> <p>Miscellaneous Topics –Detailed study</p> <p align="center"><b>Part -Test 3.1</b></p>
<p><b>Design &amp; Wiring</b></p>	<p align="center"><b>Design &amp; Wiring</b></p> <p>Wiring Types</p> <p>Indian Electricity Rules-1956</p> <p>Classification of Voltages, Standards And Specifications</p> <p>Wiring materials and accessories</p> <p>General Rules for Wiring</p> <p>Protective Electrical Installation</p> <p>Earthing</p> <p>Testing of Installation Scheme</p> <p align="center"><b>Part -Test 3.2</b></p> <p><b>Test Discussion (No. of sessions will depend on student response) Assistant Engineer + GATE + ESE + SSC JE + State PSC level question discussion</b></p>
<p align="center"><b>Combined 3-Level Subject Tests</b></p>	

## Electrical Measurements + Design & Wiring

### Reasoning for Technical Exams (FREE Course)

(For SSC JE, RRB JE other JE / AE post)

*Questions discussed in class include GATE + ESE + SSC JE + KPSC + Other state PSC exams + Concept Building Questions (CBQs)*

Course Plan	<b>Reasoning for Technical Exams</b> <b>Complimentary course with Module-SE3</b>
<b>Reasoning</b> <b>(FREE Course with Module SE-3)</b>	<b>Reasoning Course</b>
	Counting of Figures
	Cubes and Dice
	Grouping of Images
	Mirror Images
	Paper Cutting
	Venn Diagram
	Analogy (Alphabetic and Number)
	Syllogisms
	Word Formation
	Logical Sequence of Words
	Blood Relation
	Direction and Distance
	Clock
	Calendar
	Dictionary
	Special Series
Ranking Arrangement	
Miscellaneous	
<b>FREE Full Reasoning Topic Tests</b>	

**Features of Reasoning Classes included with this course**

**15 Hours Capsule Reasoning**

**for SSC JE & all Technical exams**

- Topic wise coverage of Entire **Reasoning Topics for all Technical Exams**
- **Out of the box Short cuts and easy Tricks** to solve Reasoning questions in 20 seconds
- SSC JE Previous Year Question Paper Discussion ( **full Reasoning Question Discussion**)
- 10 days Intensive Reasoning Course
- **FAST MATHS** Session for problem solving helpful for all exams
- Reasoning Sessions handled by **Multiple time Qualifier of SSC CGL,CHSL,RRB**

**A Very Useful Session for all serious Aspirants**

<p>Course Plan + Test Analysis</p>	<p align="center"><b>Power Systems &amp; Alternative Energy Module-SE4 Scoring Level- 3</b></p>
<p><b>Basics, Generation, Transmission &amp; Distribution</b></p>	<p align="center"><b>Power System Basics</b></p> <p>Electrical Power Generation</p> <p>Power factor improvement</p> <p>Transmission Line Elements</p> <p>Distribution System (AC and DC)</p> <p>Substation Basics</p> <p>Economic Load Dispatch</p> <p>Classification of Transmission Line / Parameters ( <b>Detailed Study</b>)</p> <p align="center"><b>Part -Test 4.1</b></p> <p align="center"><b>Transmission Parameters &amp; Switch Gear and Protection</b></p> <p>Transmission Line + Effects ( <b>Detailed Study</b>)</p> <p>p.u. systems</p> <p>Short circuit current calculation</p> <p>Fault Analysis Symmetrical &amp; Unsymmetrical faults (Basic concepts)</p> <p>Fuses-circuit breakers-relays</p> <p>Protection of Alternators Transformers, Transmission Line (<b>Detailed Study</b>)</p> <p>Earthing and lightning arresters</p> <p>HVAC, HVDC , FACTS</p> <p align="center"><b>Part -Test 4.2</b></p>
<p><b>Switch Gear and Protection</b></p>	<p align="center"><b>Renewable Sources Of Energy</b></p> <p>Conventional sources of energy</p> <p>Non-conventional source of energy</p> <p>Wind energy basics</p> <p>Application of wind energy devices</p> <p>Concepts of Ocean Energy</p> <p align="center"><b>Part -Test 4.3</b></p> <p><b>Test Discussion (No. of sessions will depend on student response)</b>  <b>Assistant Engineer + GATE + ESE + SSC JE + State PSC level</b>  <b>question discussion</b></p>
<p><b>Sources of Energy</b></p>	<p align="center"><b>Combined 3-Level Subject Tests</b></p>



*Questions discussed in class include GATE + ESE + SSC JE + KPSC + Other state PSC exams + Concept Building Questions (CBQs)*

Course Plan + Test Analysis	<h2 style="margin: 0;">Basics of Electronics</h2> <h3 style="margin: 0;">Module-SE5</h3> <h3 style="margin: 0; color: red;">Scoring Level- 3</h3>
<p style="color: red; font-weight: bold;">A complete course on Electronics for all competitive exams</p>	<b>Electronic Devices</b>
	Fundamentals + Basics Semiconductor Theory
	Semiconductor materials, devices and circuits
	Diodes & Rectifiers
	Part -Test 5.1
	<b>Transistor Amplifiers</b>
	Amplifier configurations
	Oscillators and Multi vibrators
	Op-Amp and Wave Shaping Circuits
	Part -Test 5.2
	<b>Digital electronics</b>
	Number systems
	Boolean Algebra
	Logic Circuits
	Combinational Logic Circuits
	Sequential Logic Circuits
	Part -Test 5.3
	<b>Microprocessors and Micro controller family</b>
	Micro Controller Architecture
	Interfacing & Applications
Application, classification and working of computers	
Working of memory and input – output devices	
Flow chart, Algorithm, Data Processing and Programming Methodology	
Part -Test 5.4	
<b>Test Discussion (No. of sessions will depend on student response)</b> <b>Assistant Engineer + GATE + ESE + SSC JE + State PSC level question discussion</b>	
Combined 3-Level Subject Tests	

*Questions discussed in class include GATE + ESE + SSC JE + KPSC + Other state PSC exams + Concept Building Questions (CBQs)*

<p><b>Course Plan + Test Analysis</b></p>	<p><b>Power Electronics + Basics of Electromagnetic Theory + Illumination Module-SE6 Scoring Level- 3</b></p>
<p><b>Power Electronics and its Applications</b></p>	<p><b>Power Electronics</b></p>
	<p>Power Electronics Basics</p>
	<p>Semiconductor Power Diodes, Transistors, Thyristors, Triacs</p>
	<p>Power Control Devices</p>
	<p>Converters and Inverters</p>
	<p>Voltage Regulators and Power Supplies</p>
	<p><b>Part -Test 6.1</b></p> <p><b>Test Discussion (No. of sessions will depend on student response) Assistant Engineer + SUB Engineer + JE level question discussions</b></p>
<p><b>Basics of Electromagnetic Theory</b></p>	<p><b>Basics of Electromagnetic Theory for KPSC</b></p>
	<p>Gauss Theorem</p>
	<p>Electric Field And Potential Due To Point, Line, Plane And Spherical Charge Distribution</p>
	<p>Ampere's And Biot-Savarts Law</p>
	<p>Inductance; Dielectrics; Capacitance</p>
	<p><b>Part -Test 6.2</b></p>
<p><b>Illumination</b></p>	<p><b>Illumination</b></p>
	<p>Illumination – terms and definitions</p>
	<p>Laws of illumination lighting schemes</p>
	<p>Design and calculation</p>
	<p>Lamps – different types – working</p>
<p><b>3-Level Subject Tests</b></p>	

*Questions discussed in class include GATE + ESE + SSC JE + KPSC + Other state PSC exams + Concept Building Questions (CBQs)*

Subjects which are specific only for Assistant Engineer /  
 Electrical Inspectorate exams

*(Control Systems, Signals & Systems, Electrical System/  
 Machine Design)*

<p><b>Course Plan +                  Test Analysis</b></p>	<p align="center"><b>Signals &amp; Systems                  Control Systems                  Module- SE-7                  Scoring Level- 3</b></p>
<p><b>Signals and                  systems</b></p>	<p align="center"><b>Signals and systems</b></p>
	<p>Representation of continuous and discrete time signals; shifting and scaling operation; liner time invariant and causal systems:</p>
	<p>Representation of continuous and discrete time signals; shifting and</p> <p align="center"><b>Part -Test 8.1</b></p>
	<p>Representation of continuous and discrete time signals; shifting                  Fourier, Laplace and Z transforms</p>
	<p align="center"><b>Part -Test 8.2</b></p>
	<p><b>Test Discussion (No. of sessions will depend on student response)                  Assistant Engineer + GATE + ESE level question discussion</b></p>
<p><b>Control Systems</b></p>	<p align="center"><b>Control Systems</b></p>
	<p>Principles of feedback; transfer function; block diagrams</p>
	<p>Steady-State Errors; Routh and Nyquist techniques</p>
	<p>Bode plots; Root Loci</p>
	<p align="center"><b>Part -Test 8.3</b></p>
	<p>Lag, Lead and Lead-Lag Compensation</p>
	<p>State Space Model</p>
<p>State Transition Matrix, Controllability And Observability</p>	
<p align="center"><b>Part -Test 8.4</b></p>	
<p align="center"><b>Combined 3-Level Subject Tests</b></p>	

*Questions discussed in class include GATE + ESE + SSC JE + KPSC + Other state  
 PSC exams + Concept Building Questions (CBQs)*

<b>Course Plan + Test Analysis</b>	<b>Electrical System Design Module- SE-8 Scoring Level- 2</b>
<b>Electrical System Design</b>	<b>Electrical system Design</b>
	Medium and HV installations
	Design of distribution systems with light power and motor loads
	Design of indoor and outdoor substation
	<b>Part -Test 9.1</b>
	Design of Earthing system
	Selection of standby generator
	Pre-commissioning tests
	<b>Part -Test 9.2</b>
<b>Test Discussion (No. of sessions will depend on student response) Assistant Engineer + GATE + ESE + SSC JE + State PSC level question discussion</b>	
<b>Electrical Machine Design</b>	<b>Electrical Machine Design</b>
	Design of transformers
	Design of DC machines
	<b>Part -Test 9.3</b>
	Design of synchronous machines
	Design of three phase induction motors
<b>Part -Test 9.4</b>	
<b>Combined 3-Level Subject Tests</b>	

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KSEB SUB ENGINEER  
KPSC / KSEB ASSISTANT ENGINEER  
ELECTRICAL OVERSEER**

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Complete Pre-recorded video class sessions + Surprise tests + Part Tests +  
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Platform & SCORE E3 Learning Mobile APP**

## Technical Syllabus Comparison

Study Conceptually Prepare Comprehensively		Diploma Qualification Exams		B.Tech/ Degree Level Exams	
Sl.No.	TOPICS	KSEB Sub Engineer	SSC JE & RRB JE	KPSC / KSEB / PWD  Assistant Engineer/  Assistant Electrical Inspector	Assistant Professor ( M.Tech Qualification)  Polytechnic Lecturer
1	Basic concepts	✓	✓	✓	✓
2	Circuit laws & Network Theory	✓	✓	✓	✓
3	Magnetic Circuit	✓	✓	✓	✓
4	AC Fundamentals	✓	✓	✓	✓
5	Measurement and measuring instruments	✓	✓	✓	✓
6	Electrical Machines	✓	✓	✓	✓
7	Fractional Kilowatt Motors and Single Phase Induction Motors	✓	✓	✓	✓
8	Synchronous Machines	✓	✓	✓	✓
9	Generation, Transmission and Distribution	✓	✓	✓	✓
10	Switchgears	✓	✓	✓	✓
11	Estimation and costing	✓	✓	✓	✓
12	Utilization of Electrical Energy	✓	✓	✓	✓
13	Basic Electronics	✓	✓	✓	✓
14	Power Electronics	✓	✓	✓	✓
15	Analog Electronics, Linear IC , OP-AMP	*	*	✓	✓
16	Digital Electronics & Microprocessors			✓	✓
18	Electrical system Design	*	*	✓	✓
19	Electrical Machine Design			✓	✓
20	Electromagnetics	*	*	✓	✓
21	Signals and systems	*	*	✓	✓
22	Control Systems			✓	✓

*\* Even though the subject is not explicitly mentioned in the syllabus, a basic understanding of the subject is recommended*

Usual footnote in Kerala PSC exam syllabus/ notification

**NOTE:** - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper

**## So Prepare Comprehensively!!**



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PWD ASSISTANT ENGINEER  
ELECTRICAL OVERSEER  
KSEB SUB ENGINEER  
KPSC / KSEB ASSISTANT ENGINEER**

Entire course designed and  
conducted by SSC, RRB,  
KPSC RANKHOLDERS  
& GATE faculties

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