



SSC JE

ELECTRICAL

EXAM SYLLABUS

Adda247

INDIA'S NO.1 GOVT JOB PREP APP



PAPER-I



General Intelligence & Reasoning

The Syllabus for General Intelligence would include questions of both verbal and non-verbal types. The test may include questions on analogies, similarities, differences, space visualization, problem solving, analysis, judgment, decision-making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning, verbal and figure classification, arithmetical number series, etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationships, arithmetical computations and other analytical functions.



General Awareness

Questions will be aimed at testing the candidate's general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and such matters of everyday observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to India and its neighboring countries, especially pertaining to History, Culture, Geography, Economic Scene, General Polity and Scientific Research, etc. These questions will be such that they do not require a special study of any discipline.



Part-B (Electrical Engineering)

Fundamentals of Electrical Engineering, Magnetic Circuits, A.C. Fundamentals, Measurement and Measuring Instruments, Electrical Machines, Special Electric Machines and Synchronous Generators, Generation, Transmission and Distribution, Estimation & Costing, Utilization of Electrical Energy, Basic Electronics, Power Electronics.

PAPER-II



Part-B (Electrical Engineering)

- **Fundamentals of Electrical Engineering:** Concepts of Electrical Circuit Elements - Resistors, Capacitors, Inductors, Batteries and the factors affecting their values and performance. Concept of Voltage, current, power, energy, flux, etc. and their units.
- **Network Solution Methods:** KCL, KVL, Node and Mesh Analysis.
- **Network Theorems:** Thevenin's, Norton's Superposition and Maximum Power Transfer Theorem.
- **Magnetic Circuits:** Concepts of Flux, Reluctance, Self & Mutual Inductance, Magnetomotive Force, Magnetic Circuits.
- **A.C. Fundamentals:** RMS and Average Values of Alternating Waves. Simple series and parallel A.C. Circuits, Resonance, balanced three-phase circuits, StarDelta transformation, Complex power and Power Factor in AC circuits.



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PAPER-II



Measurement and Measuring Instruments

Measurement of Voltage, Current, Power and Power Factor. Classification of Instruments, types of errors. Galvanometer, Ammeter, Voltmeter, Wattmeter, Wheatstone Bridge, Kelvin's double bridge, Energy Meter, Megger. Constructional features and Calibration of single-phase electronic energy meter. CT, PT and their uses.



Electrical Machines

Single-Phase and Three-Phase Transformers. DC Machines, their types, characteristics, Losses, efficiency, and applications. AC Machines: Single-Phase and Three-Phase Induction Motors, Starting, Speed Control methods, electrical Braking and Torque-Speed characteristics.



Special Electric Machines and Synchronous Generators

Fractional Motors, Servomotors. Armature Reaction, Parallel Operation of Generators, Synchronization.



Generation, Transmission and Distribution

Types of Power Stations, Load Factor, Demand Factor, and Diversity Factor. Power Factor and its improvement. Types of Transmission and Distribution lines, Transmission line parameters, Corona Effect and Ferranti Effect. Circuit Breakers, Protection of Generators and Transformers. Coaxial Cables, their ratings, and efficiency.



Estimation & Costing

Estimation of lighting schemes. Electric installation of machines and relevant IE Rules. Earthing Practices and IE Rules.



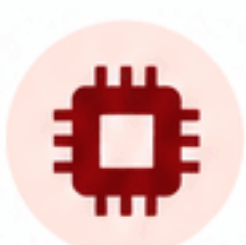
Utilization of Electrical Energy

Illumination, Electric Heating, Electric Welding, Electroplating, Electric Traction and Drives.



Basic Electronics

P-N Junction Diodes, Rectifiers and Wave-Shapers, Clipping, Clamping. BJT and FET Transistors, their characteristics, Amplifiers, Oscillators.



Power Electronics

Static V-I characteristics of Thyristor. Firing & Gating circuits for Thyristor; DC to DC conversion: Buck, Boost and Buck-Boost Converters; Single-phase half-controlled, full-controlled and midpoint-controlled rectifier.

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INDIA'S NO.1 GOVT EXAM PREP PLATFORM

ELECTRICAL ENGINEERING MAHAPACK

For All Electrical Engineering Exams



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Mock
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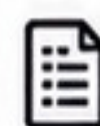
SSC JE



RRB JE



State AE/JE



PSU Exams



& More...

POWER SYSTEMS

ELECTRICAL MACHINES

CONTROL SYSTEMS

POWER ELECTRONICS

ELECTRICAL MEASUREMENTS

DIGITAL ELECTRONICS

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Railways



Defence



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and many more...

PRACTICE TODAY

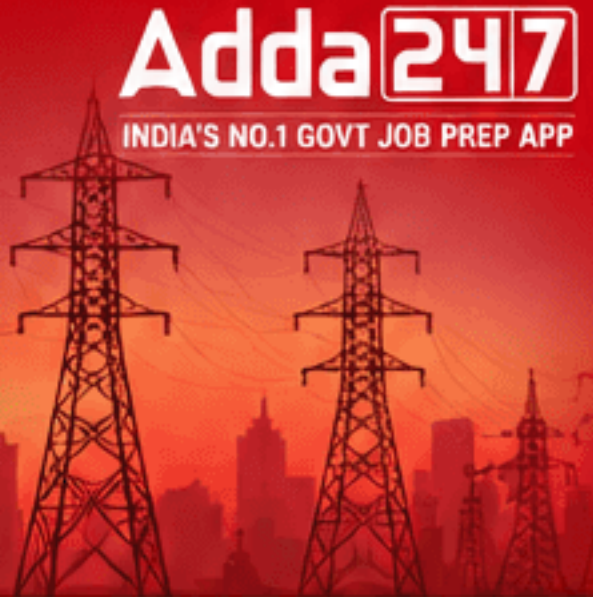
ACHIEVE TOMORROW



SSC JE

ELECTRICAL

EXAM PATTERN



SSC JE Electrical Exam Pattern

Papers	Mode of Examination	Subject	Number of Questions / Maximum Marks	Duration
Paper-I	Computer-Based Examination	(i) General Intelligence and Reasoning	50/ 50	2 Hours (2 hours and 40 minutes for the candidates who are eligible for scribe)
		(ii) General Awareness	50/ 50	
		(iii) For the post of JE (Civil): Part-A GeneralEngineering (Civil & Structural) OR For the post of JE (Electrical): Part-B General Engineering (Electrical) OR For the post of JE (Mechanical): Part-C: General Engineering (Mechanical) OR For the post of SA in IMD: Part-D General Engineering (Computer Science and Information Technology) / Part-E General Engineering (Electronics and Telecommunication Engineering) Part-F Physics OR For the post of JE (Telecom):	100/ 100	



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EXAM PATTERN

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Papers	Mode of Examination	Subject	Number of Questions / Maximum Marks	Duration
Paper-II	Computer-Based Examination	For the post of JE (Civil): Part-A General Engineering (Civil & Structural) OR For the post of JE (Electrical): Part-B General Engineering (Electrical) OR For the post of JE (Mechanical): Part-C: General Engineering (Mechanical) OR For the post of SA in IMD: Part-D General Engineering (Computer Science and Information Technology) / Part-E General Engineering (Electronics and Telecommunication Engineering) / Part-F Physics OR For the post of JE (Telecom): Part-G: Telecommunication	100/ 300	2 Hours (2 hours and 40 minutes for the candidates who are eligible for scribe)



Important Points

- Paper-I & Paper-II will consist of Objective Type, Multiple-Choice Questions only. The questions will be set in Hindi, English only.
- There will be a negative marking of 0.25 marks for each wrong answer in Paper-I and one (01) mark for each wrong answer in Paper-II.