

**MADE EASY**

India's Best Institute for IES, GATE & PSUs

Detailed Schedule
Online Test Series
SSC-JE 2021
ELECTRICAL ENGG.

Test No.	Activation Date	Subject	Marks/Time
1.	10 th Oct, 2021	History & Culture + Geography	50 M /30 min
2.		Indian Polity + Indian Economy	50 M /30 min
3.		Current Affairs + General Knowledge	50 M /30 min
4.		General Science & Technology + Environment	50 M /30 min
5.		Analogies or Similarity + Blood relationship + Symbols and Notations + Classification	50 M /30 min
6.		Directions and Distance Test + Series + Coding and Decoding + Word Formation	50 M /30 min
7.		Completion of Figure + Ranking Arrangement + Find the Missing Number + Arrangement of Words in Logical Order + Cubes and Dice	50 M /30 min
8.		Logical Venn Diagram + Paper Cutting, Folding and Mirror images + Matrix reasoning + Syllogism + Statement and Conclusions	50 M /30 min
9.		Electrical Circuits : Concepts of resistance, inductance, capacitance, and various factors affecting them. Concepts of current, voltage, power, energy and their units. Kirchhoff's law, Simple Circuit solution using network theorems. Instantaneous, peak, R.M.S. and average values of alternating waves, Representation of sinusoidal wave form, simple series and parallel AC Circuits consisting of R, L and C, Resonance, Tank Circuit. Poly Phase system – star and delta connection, 3-phase power, DC and sinusoidal response of R-Land R-C circuit.	50 M /30 min
10.		Magnetic Circuit : Concepts of flux, mmf, reluctance, Different kinds of magnetic materials, Magnetic calculations for conductors of different configuration e.g. straight, circular, solenoidal, etc. Electromagnetic induction, self and mutual induction.	50 M /30 min
11.		Measurement and Measuring Instruments : Measurement of power (1 phase and 3-phase, both active and re-active) and energy, 2 wattmeter method of 3-phase power measurement. Measurement of frequency and phase angle. Ammeter and voltmeter (both moving oil and moving iron type), extension of range wattmeter, Multimeters, Megger, Energy meter AC Bridges. Use of CRO, Signal Generator, CT, PT and their uses. Earth fault detection.	50 M /30 min
12.		Electrical Machines-1 : 1 phase and 3 phase transformers – Construction, Principles of operation, equivalent circuit, voltage regulation, O.C. and S.C. Tests, Losses and efficiency. Effect of voltage, frequency and wave form on losses. Parallel operation of 1 phase /3 phase transformers. Auto transformers. 3 phase induction motors, rotating magnetic field, principle of operation, equivalent circuit, torque-speed characteristics, starting and speed control of 3 phase induction motors. Methods of braking, effect of voltage and frequency variation on torque speed characteristics. Fractional Kilowatt Motors and Single Phase Induction Motors: Characteristics and applications.	50 M /30 min

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Test No.	Activation Date	Subject	Marks/Time
13.	10 th Oct, 2021	Electrical Machines-2 : D.C. Machine – Construction, Basic Principles of D.C. motors and generators, their characteristics, speed control and starting of D.C. Motors. Method of braking motor, Losses and efficiency of D.C. Machines. Generation of 3-phase e.m.f. armature reaction, voltage regulation, parallel operation of two alternators, synchronizing, control of active and reactive power. Starting and applications of synchronous motors.	50 M /30 min
14.		Power Systems : Different types of power stations, Load factor, diversity factor, demand factor, cost of generation, inter-connection of power stations. Power factor improvement, various types of tariffs, types of faults, short circuit current for symmetrical faults. Switchgears – rating of circuit breakers, Principles of arc extinction by oil and air, H.R.C. Fuses, Protection against earth leakage/over current, etc. Buchholtz relay, Merz-Price system of protection of generators & transformers, protection of feeders and bus bars. Lightning arresters, various transmission and distribution system, comparison of conductor materials, efficiency of different system. Cable – Different type of cables, cable rating and derating factor.	50 M /30 min
15.		Estimation and Costing : Estimation of lighting scheme, electric installation of machines and relevant IE rules. Earthing practices and IE Rules. Utilization of Electrical Energy : Illumination, Electric heating, Electric welding, Electroplating, Electric drives and motors.	50 M /30 min
16.		Basic Electronics : Working of various electronic devices e.g. P N Junction diodes, Transistors (NPN and PNP type), BJT and JFET. Simple circuits using these devices.	50 M /30 min
17.	10 th Nov, 2021	Full Syllabus Test 1	200 M /120 min
18.	10 th Nov, 2021	Full Syllabus Test 2	200 M /120 min
19.	10 th Nov, 2021	Full Syllabus Test 3	200 M /120 min
20.	10 th Nov, 2021	Full Syllabus Test 4	200 M /120 min
21.	10 th Dec, 2021	Full Syllabus Test 5	200 M /120 min
22.	10 th Dec, 2021	Full Syllabus Test 6	200 M /120 min
23.	10 th Dec, 2021	Full Syllabus Test 7	200 M /120 min
24.	10 th Dec, 2021	Full Syllabus Test 8	200 M /120 min

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