

Shortlist for Written Test for recruitment of Engineer (Electrical) against VC NO. 13 /16

Admit Cards and Syllabus for Written Test have been issued to the candidates on their registered e-mail ids. Candidates are requested to check their email inbox/junk/spam folder for the admit card

The exam timings are 02.00 PM. If any other time is mentioned in the admit card then kindly ignore it. The duration of the Written Test is 3 hours

Candidates are advised to carry their admit card with them on the day of the Written Test. Further, no request for change in venue shall be entertained.

S No	Registration No	Name	Exam Center Code	Exam Center Name	Exam Venue	Exam Time	Exam Date	Exam Roll No
1	300799	Jyoti Mahendra	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4001
2	300802	milon acherjee	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4002
3	300905	KOUSHIK LAHA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4003
4	301023	NISHIT DEWANGAN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4004
5	301065	VIVEK BABU	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4005
6	301110	Gaurav Agarwal	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4006
7	301173	NILANJAN MITRA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4007
8	301174	BHARAT RATNAKER	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4008
9	301261	AVINASH GUPTA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4009
10	301317	Vaibhav Rao	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4010

S No	Registration No	Name	Exam Center Code	Exam Center Name	Exam Venue	Exam Time	Exam Date	Exam Roll No
11	301911	alok shukla	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4011
12	301926	SOURAV BHATTACHARJEE	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4012
13	302015	SAROJ KUMAR GARHWAL	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4013
14	302129	KANUKOTI GIRINATH BABU	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4014
15	302149	VIDIT KUMAR JAIN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4015
16	302719	Rajarshi Barman Roy	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4016
17	302793	SUBODH SHARMA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4017
18	302813	PARUL NARANG	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4018
19	303077	MADHANKUMAR	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4019
20	303402	Arjuna Charan Panda	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4020
21	303427	PURVA SHARMA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4021
22	303621	AMIT SAXENA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4022
23	303646	DINESH PRASAD MAHATO	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4023

S No	Registration No	Name	Exam Center Code	Exam Center Name	Exam Venue	Exam Time	Exam Date	Exam Roll No
24	303648	VISHAL PURI	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4024
25	303944	VAJJA MOHANA RAJU	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4025
26	304120	Sourav Kanrar	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4026
27	304222	JAGDISH SHANKAR HAMAK	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4027
28	304693	dharmendra raj	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4028
29	304901	JAI KARAN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4029
30	304922	NIKHIL MAHENDRU	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4030
31	305278	HITESH	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4031
32	305532	V VENKATAPAVAN RAGHURAM	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4032
33	305653	atul kumar chaudhary	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4033
34	305891	ashish mathur	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4034
35	305960	NITIN RAJ	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4035
36	306164	KOUSIK MITRA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4036

S No	Registration No	Name	Exam Center Code	Exam Center Name	Exam Venue	Exam Time	Exam Date	Exam Roll No
37	306291	Suresh kumar kornana	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4037
38	307078	niraj mishra	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4038
39	307647	RISHABH LOHIYA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4039
40	307704	PRIYA MALHOTRA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4040
41	308626	Govind	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4041
42	308721	ABHISHEK KUMAR DUBEY	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4042
43	308834	RAJANIKANT BARIK	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4043
44	309076	Kamlesh Ramanujprasad Pal	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4044
45	309295	sandeep sakle	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4045
46	309497	Ashish Kumar Choudhury	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4046
47	309942	ABHISHEK KUMAR RANJAN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4047
48	309984	Abhijit Das	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4048
49	310510	ABHASH CHAUHAN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4049

S No	Registration No	Name	Exam Center Code	Exam Center Name	Exam Venue	Exam Time	Exam Date	Exam Roll No
50	310639	KUSHAL KRISHAN TAMBOLI	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4050
51	311390	PRATIK DUTTA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4051
52	311614	saptak basak	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4052
53	311682	Durai Raj M	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4053
54	312027	ravi prakash singh	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4054
55	312131	Sweta Naithani	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4055
56	312188	ANANDA CHANDRA NAIK	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4056
57	312189	Aman kant Patel	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4057
58	312518	Kumar Gaurav	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4058
59	312975	SIVAKRISHNA REDDY	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4059
60	313155	mayank dixit	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4060
61	313363	RAKESH KUMAR	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4061
62	313581	sundeep devaraj B	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4062

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63	313590	Pranav Kohli	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4063
64	314247	SATYENDRA SHARMA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4064
65	314849	RAMARAO MUPPIDI	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4065
66	315011	viveka nand upadhyay	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4066
67	315145	ALEKHA CHANDRA BEHERA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4067
68	315642	PRIYA RANJAN MOHAPATRA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4068
69	315827	IMDADUR RAHAMAN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4069
70	316733	SUNIL DUTT SHARMA	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4070
71	317034	SANJAY KUMAR MANDAL	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4071
72	317370	ANIRBAN SARKAR	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4072
73	318128	Rahul kumar	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4073
74	318421	PAPPU KUMAR	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4074
75	319223	Ashish Kumar	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4075

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76	319313	SOURABH KUMAR	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4076
77	319499	R.Balaji	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4077
78	319691	MOHD IMRAN	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4078
79	319817	Chetan Saxena	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4079
80	320280	MAHENDRA SINGH ADHIKARI	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4080
81	320331	CHANDRA PRAKASH	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4081
82	320461	Jitender	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4082
83	320905	Pravesh Kumar	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4083
84	320948	Debiprasanna Swain	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4084
85	321174	panchal shrinivas baburao	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4085
86	321205	ANUBHAV SINGH	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4086
87	321334	PATEL PRAKASH BACHUBHAI	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4087
88	321525	ANSHUMAN PANDEY	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4088

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89	321614	ADITYA CHOUBEY	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4089
90	321653	NITIN KUMAR	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4090
91	321901	Bhupesh Kumar	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4091
92	321912	Ashish Kumar	DELHI	Computer Junction Okhla	C/O Sprat Technologies Pvt. Ltd. F-62, Okhla Industrial Area Phase - 1, Delhi - 110020	02.00 P.M.	23.09.2016	4092

SYLLABUS FOR ELECTRICAL ENGINEER – QA DIVISION

(Engineers – with 04 Years experience)

Electric Circuits and Fields: Network graph, KCL, KVL, Node and Mesh analysis, Transient response of dc and ac networks, Sinusoidal steady-state analysis, Resonance, basic filters, Ideal current and voltage sources, Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum power transfer theorem, Two-port networks, Three phase circuits, Power and power factor in ac circuits. Electromagnetic Fields Coulomb's Law, Electric Field Intensity, Electric Flux Density, Gauss's Law, Divergence, Electric field and potential due to point, line, plane and spherical charge distributions, Effect of dielectric medium, Capacitance of simple configurations, Biot-Savart's law, Ampere's law, Curl, Faraday's law, Lorentz force, Inductance, Magnetomotive force, Reluctance, Magnetic circuits, Self and Mutual inductance of simple configurations.

Signals and Systems: Representation of continuous and discrete-time signals, Shifting and scaling operations, Linear Time Invariant and Causal systems, Fourier series representation of continuous periodic signals, Sampling theorem, Applications of Fourier Transform, Laplace Transform and z-Transform.

Electrical Machines: Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three phase transformers: connections, parallel operation; Auto-transformer, energy conversion principles, DC machines: separately excited, series and shunt, motoring and generating mode of operation and their characteristics, starting and speed control of dc motors, Operating principle of single phase induction motors; Synchronous machines: performance, regulation and parallel operation of generators, starting of synchronous motor, characteristics; Types of losses and efficiency calculations of electric machines. Servo and Stepper motors.

Power Systems: Power generation concepts, ac and dc transmission concepts, Models and performance of transmission lines and cables, corona and radio interference, Series and shunt compensation, Electric field distribution and insulators, Distribution systems, Per-unit quantities, fault analysis, Principles of over-current, differential and distance protection, solid state relays and digital protection, Circuit breakers, System stability concepts, swing curve and Equal area criterion. HVDC transmission and FACTS concepts.

Control Systems: Mathematical modeling and representation of systems, Feedback principle, transfer function, Block diagrams and Signal flow graphs, Transient and Steady-state analysis of linear time invariant systems, Routh-Hurwitz and Nyquist criteria, Bode plots, Root loci, Stability analysis, Lag, Lead and Lead-Lag compensators; P, PI and PID controllers; State space model, State transition matrix. Controllability and observability.

Electrical and Electronic Measurements: Bridges and Potentiometers, PMMC dynamometer and Induction type instruments, Measurement of voltage, current, power, energy and power factor; Instrument transformers, Digital voltmeters and multimeters, Phase, Time and Frequency measurement, Q meters, Oscilloscopes, potentiometric recorders, Error analysis.

Analog and Digital Electronics: Characteristics of diodes, BJT, FET, MOSFET; Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: Biasing, Equivalent circuit and Frequency response;

Power Electronics and Drives: Characteristics and operation of semiconductor power devices: Diode, Thyristor, Triac, GTO, MOSFET, IGBT, DC to DC conversion: Buck, Boost and Buck-Boost converters, triggering circuits, phase control rectifiers, Single and three phase configuration of uncontrolled rectifiers, Line commutated thyristor based converters, Bidirectional ac to dc voltage source converters, fully controlled and half controlled, principles of choppers and Inverters, Issues of line current harmonics, Power factor, Distortion factor of ac to dc converters, Single phase and three phase inverters, basic concepts of adjustable speed dc and ac drives, applications of variable-speed drives

Microprocessors and Microcomputers: Basics of PC Organization, CPU, instruction set, register set, timing diagram, programming, interrupts, memory interfacing, I/O interfacing, programmable peripheral devices.

Measurement and Instrumentation: Error analysis; measurement of current, voltage, power, energy, power-factor, resistance, inductance, capacitance and frequency; bridge measurement. Signal conditioning circuit; Electronic measuring instruments: multimeter, CRO, digital voltmeter, frequency counter, Q-meter, spectrum-analyzer, distortion-meter. Transducers: thermocouple, thermistor, LVDT, strain-gauge, piezo-electric crystal.

Digital Communication: Pulse code modulation (PCM), differential pulse code modulation (DPCM), delta modulation (DM), Digital modulation and demodulation schemes: amplitude, phase and frequency keying schemes (ASK, PSK, FSK).

Application/Utilization of Electrical Energy and Activities associated like design aspect, pre-dispatch Inspection, installation, testing, commissioning, maintenance etc.

Electrical Traction: Railway Traction system in India, Categorization and present existence. Advantage of Electric traction, Train dynamics, type of Train Services, traction power demand, traction power distribution system.

Installation and Commissioning activities of various electrical equipments, Safety and measures needed.

- **Inspection and Testing:** Testing of Electrical Equipments, components, fittings, type of tests, sampling of components, test method of different electrical equipments, components, cables, wires, insulators etc. Type of Sampling (single stage, double stage, two stage etc.) and its role in testing, IS 2500 and its various Inspection levels, AQL etc. Errors in the measurements and significance. Accuracy and Precision in measurements.

Tolerances and its type, role in testing, Check sheet and test plan preparation, GTP/TS and other IS with the test to perform in accepting the material, Type test/Routine test/acceptance test with in-depth understanding.

Calibration and its role in measurement. Traceability and its importance, Usefulness of calibration, measurement equipment identification.

Management:

Basic concept of management including personnel (HRD), finance, Business development.

Information Technology

Knowledge of computer, MS Office including word, excel worksheet, PPT etc.