

TENDER-4: ELECTRICAL ENGINEERING DEPARTMENT

Tender Ref. No.: SJVPM/NEC/LAB/ELEC/2026/04

A. Electrical Engineering Labs

Sr.No	Item Description	Specifications	Qty	Unit Price (₹)	Total Price (₹)
1	DC Machine Test Bench	220V, 5HP, Shunt/Series Compound, Digital Meters	4 Sets		
2	AC Machine Test Bench	415V, 5HP, 3-Phase Induction, Synchronous	4 Sets		
3	Transformer Test Setup	1 kVA, 230/115V, OC/SC Tests	4 Sets		
4	3-Phase Transformer Setup	5 kVA, 415/230V, Delta-Star	2 Sets		
5	Alternator Test Rig	3 kVA, 415V, Synchronous, Load Bank	1 No.		
6	Motor-Generator Set	5 HP DC Motor, 5 kVA Alternator	2 Sets		
7	Induction Motor Test Rig	3 HP, 415V, Squirrel Cage, VFD	2 Sets		
8	Universal Motor Test Setup	1 HP, 230V, AC/DC	2 Sets		
9	Single Phase Induction Motor	1 HP, 230V, Capacitor Start	4 Sets		
10	Stepper Motor Test Kit	NEMA 23, Driver, Controller	4 Sets		
11	Servo Motor Test Kit	BLDC, Encoder, Drive	2 Sets		
12	Load Bank (Resistive)	10 kW, 3-Phase, Digital Display	2 Nos.		
13	Load Bank (Inductive)	5 kVAR, 3-Phase	1 No.		
14	Ward Leonard Drive Setup	5 HP DC Motor-Generator	1 No.		
15	Swinburne's Test Setup	3 HP DC Shunt Motor	2 Sets		
16	Hopkinson's Test Setup	5 HP DC Motor-Generator	1 No.		
17	Retardation Test Setup	3 HP DC Motor, Flywheel	1 No.		
18	Field Test Setup	2×5 HP DC Series Motors	1 No.		
19	Brake Test Setup	3 HP Motor, Belt Brake	4 Sets		
20	Open Circuit Test (Alternator)	3 kVA, Variable Speed Drive	1 No.		
21	Short Circuit Test Setup	3 kVA Alternator, Ammeter	1 No.		
22	ZPF Test Setup	3 kVA, Inductive Load	1 No.		
23	Slip Test Setup	Salient Pole Alternator	1 No.		
24	Synchronizing Panel	3-Phase, Dark Lamp, Bright Lamp Method	2 Nos.		
25	V-Curve Test Setup	Synchronous Motor, Variable Excitation	1 No.		
26	No Load & Blocked Rotor Test	3 HP Induction Motor	4 Sets		
27	Speed Control of DC Motor	Armature & Field Control, Digital	4 Sets		

28	Speed Control of Induction Motor	VFD, 3 HP, 415V	2 Sets		
29	Starters for Motors	DOL, Star-Delta, Auto Transformer	4 Sets		
30	Power Measurement Setup	1-Phase & 3-Phase Wattmeters, Variac	4 Sets		
31	Energy Meter Calibration	1-Phase & 3-Phase, Rotating Type	2 Sets		
32	Power Factor Meter	1-Phase & 3-Phase, Digital	4 Nos.		
33	Frequency Meter	Digital, 45-65 Hz	4 Nos.		
34	Megger (Insulation Tester)	0-1000V, Digital	4 Nos.		
35	Earth Tester	4-Terminal, 0-100 Ohm	2 Nos.		
36	Multimeter (Digital)	True RMS, Auto Range	20 Nos.		
37	Oscilloscope (Digital)	100 MHz, 2 Channel, USB	10 Nos.		
38	Function Generator	10 MHz, Sine/Square/Triangle	10 Nos.		
39	LCR Meter	Digital, 100 Hz-100 kHz	5 Nos.		
40	Regulated Power Supply	0-30V, 0-5A, Digital	10 Nos.		
41	Wheatstone Bridge	Precision, Digital Null Detector	5 Sets		
42	Kelvin's Double Bridge	Low Resistance Measurement	3 Sets		
43	Potentiometer (Crompton)	DC, Standard Cell	3 Sets		
44	Current Transformer (CT)	100/5A, 500/5A, 1000/5A	10 Nos.		
45	Potential Transformer (PT)	11kV/110V, 415V/110V	5 Nos.		
46	Relay Test Kit	Overcurrent, Earth Fault, Differential	1 Set		
47	Circuit Breaker Test Setup	MCB, MCCB, ELCB Testing	1 Set		
48	High Voltage Test Setup	100 kV, Sphere Gap, Microammeter	1 No.		
49	Impulse Generator	200 kV, 1.2/50 μ s Wave	1 No.		
50	Dielectric Strength Tester	0-100 kV, Oil & Solid	1 No.		
51	Schering Bridge	HV Capacitance & Tan Delta	1 No.		
52	Cable Fault Locator	Murray Loop, Varley Loop	1 No.		
53	Transmission Line Model	3-Phase, 400V, π & T Network	2 Sets		
54	Distribution System Model	11kV/415V, Transformers, Lines	1 Set		
55	Load Flow Study Setup	5-Bus, 11-Bus System, Digital	1 No.		
56	Economic Load Dispatch Setup	2-Unit, 3-Unit Thermal	1 No.		
57	HVDC Transmission Model	$\pm$ 100 kV, Converter Stations	1 No.		
58	FACTS Device Model	SVC, STATCOM, UPFC	1 Set		
59	Renewable Energy Lab Kit	Solar PV Panel 500W, Wind	2 Sets		

		Turbine 1kW			
60	Solar Inverter	1 kW, Grid-Tied, MPPT	2 Nos.		
61	Battery Storage System	48V, 100 Ah Li-Ion	2 Sets		
62	PLC Training Kit	Siemens/Allen Bradley, 16 I/O	10 Sets		
63	SCADA System	HMI, PLC, Sensors, 10 Stations	1 Set		
64	Microcontroller Kit	8051, AVR, ARM, PIC	20 Sets		
65	Arduino/Raspberry Pi Kit	Complete with Sensors, Actuators	30 Sets		
66	Power System Simulator	ETAP/PSCAD (Educational License)	60 Users		
67	MATLAB/Simulink License	With Control, Power System Toolboxes	60 Users		
Total					

EMD: ₹25,000

Tender Fee: ₹5,000
