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Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current at 10 Hz – 1 kHz	Using DMM, REFERENCE MULTIMETER (8.5 Digit), AC MEASUREMET STANDARD ,THREE PHASE COMPARATOR by Direct/Comparison Method	10 µA to 1 A	0.05% to 0.016%
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current at 10 Hz – 5 kHz	Using DMM, REFERENCE MULTIMETER (8.5 Digit), AC MEASUREMET STANDARD, THREE PHASE COMPARATOR by Direct/Comparison Method	1 A to 20 A	0.016 % to 0.035 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current at 50 Hz	Using Three phase comparator by Direct Method	0.01 A to 120 A	0.013%

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4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage at 50 Hz	Using DMM & HV Probe By Direct/ Comparison Method	>1 kV to 28 kV	6%
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Power 1Ph & 3Ph (50Hz) (active and reactive) 60 V to 240V, 10 mA to 120A , UPF – 0.5 PF (lead & Lag)	Using Three Phase Comparator by Direct / Comparison Method:	0.03W to 86.4kW \(0.03VAR to 86.4kVAR)	0.012% to 0.023%
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Resistance at 1kHz	Using RLC DIGIBRIDGE, Standard AC/DC resistance By Direct/ Comparison Method	1 ohm to 100 kohm	0.3 to 0.1%
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage at 10 Hz –40 Hz	Using IVD, REFERENCE MULTIMETER (8.5 Digit), THERMAL VOLTAGE CONVERTER AC MEASUREMET STANDARD by Direct/ Comparison Method:	1 mV to 1000 V	0.5% to 0.025%

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8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage at 100kHz-1MHz	Using Multifunction Calibrator & IVD ,AC MEASUREMET STANDARD ,THERMAL VOLTAGE CONVERTER by Direct/Comparison Method	1 mV to 1 V	1.34% to 0.1%
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage at 10kHz-100kHz	Using IVD, REFERENCE MULTIMETER (8.5 Digit), THERMAL VOLTAGE CONVERTER, AC MEASUREMET STANDARD By Direct/ Comparison Method:	1 mV to 1 V	0.43 % to 0.014 %
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage at 10kHz-100kHz	Using IVD, REFERENCE MULTIMETER (8.5 Digit) THERMAL VOLTAGE CONVERTER, AC MEASUREMET STANDARDBy Direct/ Comparison Method:	1 V to 100 V	0.014% to 0.016%

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11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage at 40Hz – 10kHz	Using IVD, REFERENCE MULTIMETER (8.5 Digit), THERMAL VOLTAGE CONVERTER, AC MEASUREMET STANDARD By Direct/ Comparison Method:	1 mV to 1000 V	0.5% to 0.012 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance at 1 kHz	Using Capacitance Measuring Assembly REFERENCE STD CAPACITOR, RLC DIGIBRIDGE Direct/Comparison	1 pF to 1.0 mF	0.04 % to 1.2 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance at 1 kHz	Using Capacitance Measuring Assembly Reference STD CAPACITOR ,RLC DIGIBRIDGE Direct/Comparison method	1.0 mF to 10 mF	1.2 % to 0.3 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	High Frequency AC Voltage 100MHz -1 GHz	Using RF MILLIVOLTMETER by Direct/Comparison Method	10 mV to 7 V	3.5%

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15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	High Frequency AC Voltage 1 MHz -100 MHz	Using RF MILLIVOLTMETER by Direct/Comparison Method	10 mV to 10 V	3.3%
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance at 1 kHz	Using RLC DIGIBRIDGE Reference STD Capacitor by Direct/Comparison Method	100 µH to 10 H	0.2 % to 0.06 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor/Phase Angle 50Hz At 240V ,5A	Using Three Phase Comparator by Direct/comparison Method	+/- 0.1 - 1.0 (lag & lead) to 0°to 180° (Lead & Lag)	0.01 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current 10 Hz - 5 KHz	Using Multifunction Calibrator ,REFERENCE MULTIMETER (8.5 Digit), AC measurement standard & Shunt by Direct/ Comparison Method	10 µA to 1A	0.08 % to 0.05 %

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19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current 10 Hz - 5 KHz	Using Multifunction CALIBRATOR , REFERENCE MULTIMETER (8.5 Digit), AC measurement standard & Shunt by Direct/ Comparison Method	1A to 20 A	0.05 % to 0.035 %
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current At 50Hz	Using Three phase comparator by Direct Method	10 mA to 100 A	0.013%
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current by using current coil At 50 Hz	Using Multifunction Calibrator and Current Coil by Direct Method	20 A to 1000 A	0.55 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Power 1Ph & 3Ph (50Hz) (active and reactive) , 60 V to 240V ,10 mA to 120A , UPF – 0.5 PF (lead & Lag)	Using Three Phase Comparator by Direct / Comparison Method	(0.03W to 86.4kW) \ (0.03VAR to 86.4kVAR)	0.012% to 0.023%
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Resistance at 1 kHz	Using AC/DC RES.STD,LCR Digibridge by Direct / Comparison Method	1 ohm, 10 ohm , 100 ohm,1 kohm, 10 kohm	0.007%

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24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 10 Hz – 45 Hz	Using Multifunction Calibrator & IVD, AC MEASUREMET STANDARD , THERMAL VOLTAGE CONVERTER by Direct/Comparison Method:	1 mV to 1000 V	0.7% to 0.025%
25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 10 kHz – 50 kHz	Using Multifunction Calibrator & IVD AC MEASUREMET STANDARD THERMAL VOLTAGE CONVERTER by Direct/Comparison Method	1 mV to 1 V	0.2% to 0.014%
26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 10kHz-50kHz	Using Multifunction Calibrator & IVD AC MEASUREMET STANDARD THERMAL VOLTAGE CONVERTER by Direct/Comparison Method::	1 V to 100 V	0.014% to 0.02%

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27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 45Hz – 10kHz	Using Multifunction Calibrator & IVD AC MEASUREMET STANDARD THERMAL VOLTAGE CONVERTER by Direct/Comparison Method:	1 mV to 100 V	0.4 % to 0.008 %
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 45Hz – 10kHz	Using Multifunction Calibrator & IVD, AC MEASUREMET STANDARD THERMAL VOLTAGE CONVERTER by Direct/Comparison Method:	100 V to 1000 V	0.008% to 0.02%
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 50kHz -1MHz	Using Multifunction Calibrator & IVD AC MEASUREMET STANDARD THERMAL VOLTAGE CONVERTER by Direct/Comparison Method	1 mV to 100 mV	0.05 % to 1.2 %

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30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage 50kHz -1MHz	Using Multifunction Calibrator & IVD AC MEASUREMET STANDARD THERMAL VOLTAGE CONVERTER by Direct/Comparison Method::	100 mV to 10 V	0.25 % to 0.12 %
31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance 1 kHz	Using REFERENCE STD CAPACITOR, RLC digibridge By Direct Method	1.0 mF, 10 mF	0.05% to 0.38 %
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance 1 kHz	Using STD “Capacitor”, REFERENCE STD CAPACITOR,RLC Digibridge By Direct / Comparison Method	10 pF to 1000pF	0.003% to 0.015%
33	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance 1 kHz	Using REFERENCE STD CAPACITOR, RLC Digibridge By Direct Method	1000 pF to 1 mF	0.015% to 0.05 %

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34	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	High Frequency AC Voltage 1 MHz -1 GHz	Using Multifunction Calibrator, RF Voltmeter with Insertion Unit, Signal Generator & RF Amplifier.,1000MHz, RF Attenuator by Direct / Comparison Method	10 mV to 7 V	3.5 %
35	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance 1 kHz	Using Reference STD INDUCTOR , RLC DIGIBRIDGE by Direct / Comparison Method	100 µH to 100 mH	0.1% to 0.03%
36	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance 1 kHz	Using Reference STD INDUCTOR , RLC DIGIBRIDGE by Direct / Comparison Method	100 mH to 10H	0.03% to 0.09%
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using Current Shunt & Standard Resistance, Current Source & DMM REFERENCE MULTIMETER (8.5 Digit) by Direct/Comparison Method:	10 µA to 1 mA	0.006 % to 0.002 %

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38	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using Current Shunt & Standard Resistance, Current Source & DMM REFERENCE MULTIMETER (8.5 Digit) by Comparison,V/R Method:	20 A to 850 A	0.005 % to 0.05 %
39	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current :	Using Current Shunt & Standard Resistance, Current Source & DMM REFERENCE MULTIMETER (8.5 Digit) by Direct/Comparison Method:	1 mA to 20 A	0.002 % to 0.005 %
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage :	Using HV probe and and Digital Multimeter by Direct/Comparison method	>1 kV to 40 kV	2.5 %

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41	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using DMM, REFERENCE MULTIMETER (8.5 Digit), Standard Resistance Set, High Resistance Meter by V/I, Direct /Comparison ,Method:	0.0001 ohm to 0.001 ohm	0.03 % to 0.004 %
42	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance :	Using DMM REFERENCE MULTIMETER (8.5 Digit), Standard Resistance Set, High Resistance Meter by Direct/Comparison , V/I Method:	0.001 ohm to 1 Mohm	0.004 % to 0.001 %
43	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance :	Using DMM REFERENCE MULTIMETER (8.5 Digit), Standard High Resistance Meter by Direct/Comparison Method:	1 Mohm to 20 Gohm	0.001 % to 0.20 %

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44	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance :	Using DMM REFERENCE MULTIMETER (8.5 Digit), Standard Resistance Set, High Resistance Meter by Direct/Comparison Method:	20 Gohm to 1 Tohm	0.2% to 2.5 %
45	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using DC Reference Standard , Null Detector , Kelvin Verley Divider, REFERENCE MULTIMETER (8.5 Digit) by Direct/ Comparison method	1 mV to 10 V	0.014 % to 0.0004 %
46	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using DC Reference Standard , Null Detector , Kelvin Verley Divider, REFERENCE MULTIMETER (8.5 Digit) by Direct/ Comparison method:	10 µV to 1 mV	2 % to 0.014 %

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47	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage :	Using DC Reference Standard , Null Detector , Kelvin Verley Divider, REFERENCE MULTIMETER (8.5 Digit) by Direct/ Comparison method:	10 V to 1000 V	0.0004% to 0.0005 %
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using CALIBRATOR, STD"RESISTANCE", DMM- REFERENCE MULTIMETER (8.5 Digit) STD Shunt, By Direct/ Comparison Method	1 A to 20 A	0.005 % to 0.009 %
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using CALIBRATOR, STD"RESISTANCE", REFERENCE MULTIMETER STD Shunt, By Direct/ V/R Method	10 µA to 1 A	0.01 % to 0.005 %
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using CALIBRATOR along with current coil By Direct Method	20 A to 1000 A	0.53%

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51	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using CALIBRATOR along with Transconductance Amplifier, STD Resistance, Reference Multimeter, SYSTEM DC POWER SUPPLY, STD Shunt, By Direct/V/R Method	20 A to 850 A	0.009 % to 0.06 %
52	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using STD “Resistance” By Direct Method	0.0001 ohm to 100 kohm	0.04 % to 0.001 %
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using STD “Resistance” By Direct Method	10 Mohm to 1 Tohm	0.003 % to 2 %
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using STD “Resistance”, By Direct Method	100 kohm to 10 Mohm	0.001 % to 0.003 %

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55	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MULTIFUNCTION CALIBRATOR, DMM-REFERENCE MULTIMETER (8.5 Digit), DC Voltage Ref STD NULL DETECT, KELVIN VERLEY DIVIDER By Direct / Comparison Method	10 µV to 10 V	2 % to 0.0003 %
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using MULTIFUNCTION CALIBRATOR, DMM-REFERENCE MULTIMETER (8.5 Digit), DC Voltage Ref STD NULL DETECTOR, KELVIN VERLEY DIVIDER By Direct / Comparison Method	10 V to 1000 V	0.0003 % to 0.0004 %
57	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Attenuation 50MHz–1GHz	Using RF Level Meter, RF MILLIVOLTMETER by Direct/Comparison Method	1 dB to 10 dB	0.15dB

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58	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Attenuation 50MHz–1GHz	Using RF Level Meter, RF Millivoltmeter by Direct/Comparison Method	10 dB to 60 dB	0.17dB
59	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power 50MHz – 2GHz	Using RF MILLIVOLTMETER, RF STEP ATTENUATOR Power Sensors, RF Attenuator , RF Amplifier By Direct/ Comparison Method	1 mW to 40 mW	4%
60	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power 50MHz – 2GHz	Using RF MILLIVOLTMETER, RF STEP ATTENUATOR Power Sensors, RF Attenuator , RF Amplifier By Direct/ Comparison Method	1 nW to 1 mW	6%
61	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power 50MHz to 1GHz	Using RF MILLIVOLTMETER, RF STEP ATTENUATOR Power Sensors, RF Attenuator , RF Amplifier By Direct/ Comparison Method	40 mW to 30 W	4%

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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
62	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	RF Power 50MHz–1GHz	Using RF MILLIVOLTMETER RF Attenuator, Amplifier Research RF Amplifier & Signal Gen by Direct / Comparison Method	40 mW to 30 W	4%
63	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	VSWR : 50MHz-2GHz	Using SWR BRIDGE WITH OPEN, SHORT & COAXIAL MISMATCH RF MILLIVOLTMETER, By Return Loss Method	1.05 to 3	0.15 to 0.3 in VSWR
64	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Attenuation 50MHz - 1GHz	Using RF MILLIVOLTMETER ,Level Meter with Sensor, Power Meter, RF Step Attenuator, RSP By Power Ratio Method	1 dB to 10 dB	0.2 dB
65	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Attenuation 50MHz - 1GHz	Using RF Millivoltmeter ,Level Meter with Sensor, Power Meter, RF Step Attenuator by Power Ratio Method	10 dB to 60 dB	0.2dB

SCOPE OF ACCREDITATION

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66	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF Power 30MHz-2GHz	Using RF MILLIVOLTMETER, RF Attenuator, Amplifier Research RF Amplifier & Signal Gen by Direct / Comparison Method	1 mW to 40 mW	4%
67	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	RF Power 30MHz-2GHz	Using RF MILLIVOLTMETER RF Attenuator, RF Amplifier & Signal Gen by Direct / Comparison Method	1 nW to 1 mW	6%
68	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using frequency Counter GPS Controlled Rubidium Frequency standard Timer/ Counter/ Analyzer,GPS Controlled frequency Standard by Direct / Comparison Method	10 Hz to 20 GHz	5X10-6 to 6x10-10
69	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time Interval / Time Period	Using Freq. Counter by Direct/Comparison Method	20 nsec to 2000 sec	0.0002%

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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
70	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using HIGH STABILITY FEQUENCY COUNTER , GPS controlled Frequency Standard, FUNCTION WAVEFORM GENERATOR, Signal Generator by Direct / Comparison Method	10 Hz to 20 GHz	5X10-6 to 6x10-10
71	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Time Interval/Time Period	Using Func. Gen. Freq. Counter by Direct Method	20 nsec to 2000 sec	0.0002%
72	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate 1000 mm X 1000 mm	Using Electronic Level By comparison method	300 X 300 mm to 1000 X 1000 mm	1.0 xsqrt of (L+W)/ 150mm, where L & W in mm
73	MECHANICAL-PRESSURE INDICATING DEVICES	(Hydraulic Medium) Pressure Gauges, Pressure Transmitters	Using Digital Pressure Calibrator and and 6.5 digit multimeter as per DKD R-6-1	0 to 700 bar	0.23bar