



### **SCOPE OF ACCREDITATION**

**Laboratory Name:** 

PATWARDHAN'S ULTIMATE CALIBRATION SERVICES LLP, GALA NO 1 & 2, KAMALKUNJ CO-OP HSG SOCIETY, BADLAPUR, THANE, MAHARASHTRA, INDIA

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Validity

21/08/2024 to 20/08/2026

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)(±)
		3.0	Permanent Facility		
1	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 μA to 1 mA	0.38 % to 0.22 %
2	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 A to 10 A	0.17 % to 0.38 %
3	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mA to 10 mA	0.22 % to 0.25 %
4	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mA to 100 mA	0.25 % to 0.17 %





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5	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mA to 1 A	0.17 %
6	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using HV Probe with DMM by Direct Method	1 kV to 40 kV	6.6 %
7	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mV to 100 mV	0.56 % to 0.12 %
8	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mV to 10 mV	5.2 % to 0.56 %
9	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 V to 10 V	0.11 %





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10	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 V to 100 V	0.11 % to 0.15 %
11	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mV to 1 V	0.12 % to 0.11 %
12	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 V to 750 V	0.15 % to 0.12 %
13	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	1 mA to 10 mA	0.18 %
14	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	10 mA to 100 mA	0.18 %





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15	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	100 mA to 1 A	0.18 %
16	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	200 μA to 1 mA	0.19 %
17	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	1 A to 10 A	0.18 % to 0.20 %
18	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC High Current @ 50 Hz	Using 5½ Multifunction Calibrator and Current Coil by Direct Method	20 A to 1000 A	1.1 %
19	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	10 V to 100 V	0.171 %
20	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	1 V to 10 V	0.171 %





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21	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	10 mV to 100 mV	0.22 % to 0.171 %
22	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	100 mV to 1 V	0.171 %
23	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	100 V to 750 V	0.171 % to 0.17 %
24	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	5 mV to 10 mV	0.36 % to 0.22 %
25	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	750 V to 1000 V	0.17 %
26	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	1 μF to 10 μF	1.2 %





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27	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	1 nF to 10 nF	1.2 %
28	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	10 μF to 100 μF	1.2 % to 1.3 %
29	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	10 nF to 100 nF	1.2 %
30	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	100 nF to 1000 nF	1.2 %
31	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	1 mH to 10 mH	1.3 %
32	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	10 mH to 100 mH	1.3 % to 1.2 %





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33	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	100 μH to 1000 μH	1.7 % to 1.3 %
34	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	100 mH to 1000 mH	1.2 %
35	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mA to 1 A	0.065 % to 0.13 %
36	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 A to 10 A	0.13 % to 0.19 %
37	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mA to 10 mA	0.13 % to 0.081 %
38	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 μA to 100 μA	1.19 % to 0.14 %





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Certificate Number

(Measure) ELECTRO-

TECHNICAL-

DIRECT CURRENT

(Measure)

DC Voltage

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39	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mA to 100 mA	0.081 % to 0.065 %
40	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 μA to 1 mA	0.14 % to 0.13 %
41	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Probe with Digital Multimeter by Direct Method	1 kV to 40 kV	6.6 %
42	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	0.1 mV to 1 mV	4.15 % to 0.43 %
43	ELECTRO- TECHNICAL- DIRECT CURRENT	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct /	1 mV to 10 mV	0.43 % to 0.048 %

Comparison Method

Digital Multimeter

and Multifunction

Calibrator by Direct / Comparison Method

1 V to 10 V

0.017 %

Using 6½ Digit





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45	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mV to 100 mV	0.048 % to 0.019 %
46	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 V to 100 V	0.017 % to 0.018 %
47	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mV to 1 V	0.019 % to 0.017 %
48	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 V to 1000 V	0.018 % to 0.019 %
49	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Low Resistance (4 Wire)	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by V/I Method	1 mohm to 10 mohm	0.13 %
50	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Low Resistance (4 Wire)	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by V/I Method	10 mohm to 100 mohm	0.13 %





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51	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Low Resistance (4 Wire)	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by V/I Method	100 mohm to 1000 mohm	0.13 %
52	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (2 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	1 Mohm to 10 Mohm	0.013 % to 0.047 %
53	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (2 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	10 Mohm to 100 Mohm	0.047 % to 0.95 %
54	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	1 kohm to 10 kohm	0.013 %
55	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	1 ohm to 10 ohm	0.46 % to 0.06 %
56	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	10 kohm to 100 kohm	0.013 %





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57	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	10 ohm to 100 ohm	0.06 % to 0.016 %
58	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	100 kohm to 1 Mohm	0.013 %
59	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	100 ohm to 1 kohm	0.016 % to 0.013 %
60	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	1 A to 10 A	0.115 % to 0.15 %
61	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	1 mA to 10 mA	0.11 % to 0.114 %
62	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	10 mA to 100 mA	0.114 %





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63	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	100 μA to 1 mA	0.114 % to 0.11 %
64	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	100 mA to 1 A	0.114 % to 0.115 %
65	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Current	Using 5½ Multifunction Calibrator and Current Coil by Direct Method	20 A to 1000 A	1.25 % to 0.99 %
66	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	1 mV to 10 mV	0.16 % to 0.115 %
67	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	1 V to 10 V	0.113 %
68	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	10 mV to 100 mV	0.115 %





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69	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	10 V to 100 V	0.113 %
70	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	100 mV to 1 V	0.115 % to 0.113 %
71	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	100 V to 1000 V	0.113 % to 0.114 %
72	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Low Resistance Box by Direct Method	10 mohm to 100 mohm	2.90 % to 1.81 %
73	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Low Resistance Box by Direct Method	100 mohm to 1000 mohm	1.81 % to 0.43 %
74	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Decade Resistance Box by Direct Method	1 Mohm to 10 Mohm	0.13 %





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75	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Decade Resistance Box by Direct Method	10 Mohm to 100 Mohm	0.13 % to 1.15 %
76	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Decade Resistance Box by Direct Method	100 Mohm to 1000 Mohm	1.15 % to 2 %
77	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	1 kohm to 10 kohm	0.13 %
78	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	1 ohm to 10 ohm	1.25 % to 0.17 %
79	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	10 kohm to 100 kohm	0.13 %
80	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	10 ohm to 100 ohm	0.17 % to 0.12 %





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81	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	using Decade Resistance Box by Direct Method	100 kohm to 1 Mohm	0.13 %
82	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	100 ohm to 1 kohm	0.12 % to 0.13 %
83	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	RTD PT-100	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 600 °C	0.39 °C
84	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type B	Using 6½ Digit Digital Multimeter by Direct Method	450 °C to 1800 °C	1.2 °C
85	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type E	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1000 °C	0.52 °C
86	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type J	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1200 °C	0.34 °C





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87	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type K	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1370 °C	0.36 °C
88	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type N	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1300 °C	0.47 °C
89	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type R	Using 6½ Digit Digital Multimeter by Direct Method	0 to 1750 °C	1.18 °C
90	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type S	Using 6½ Digit Digital Multimeter by Direct Method	0 to 1750 °C	1.18 °C
91	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type T	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 400 °C	0.36 °C
92	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	RTD PT-100	Using Universal Calibrator by Direct Method	(-) 200 °C to 600 °C	0.4 °C





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93	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type B	Using Universal Calibrator by Direct Method	450 °C to 1800 °C	0.59 °C
94	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type E	Using Universal Calibrator by Direct Method	(-) 200 °C to 1000 °C	0.36 °C
95	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type J	Using Universal Calibrator by Direct Method	(-) 200 °C to 1200 °C	0.36 °C
96	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type K	Using Universal Calibrator by Direct Method	(-) 200 °C to 1370 °C	0.36 °C
97	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type N	Using Universal Calibrator by Direct Method	(-) 200 °C to 1300 °C	0.37 °C
98	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type R	Using Universal Calibrator by Direct Method	0 to 1750 °C	0.59 °C





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99	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type S	Using Universal Calibrator by Direct Method	0 to 1750 °C	0.59 °C
100	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type T	Using Universal Calibrator by Direct Method	(-) 200 °C to 400 °C	0.36 °C
101	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Digital Multimeter by Direct Method	10 Hz to 50 Hz	0.12 %
102	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Digital Multimeter by Direct Method	50 Hz to 10 kHz	0.12 %
103	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	1 s to 10 s	0.12 s to 0.23 s
104	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	10 s to 60 s	0.23 s to 0.52 s





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105	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	18000 s to 36000 s	7.4 s to 13.7 s
106	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	3600 s to 18000 s	1.6 s to 7.4 s
107	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	36000 s to 86400 s	13.7 s to 27 s
108	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	60 s to 3600 s	0.52 s to 1.6 s
109	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	10 Hz to 45 Hz	0.036 % to 0.17 %
110	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	100 Hz to 1000 Hz	0.17 %





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111	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	1000 Hz to 10000 Hz	0.17 % to 0.012 %
112	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	50 Hz to 100 Hz	0.17 %
113	MECHANICAL- ACCELERATION AND SPEED	Centrifuge / RPM Source / Stirrer (Non-Contact Type)	Using Digital Tachometer by Comparison Method	10 rpm to 100 rpm	1.8 rpm
114	MECHANICAL- ACCELERATION AND SPEED	Centrifuge / RPM Source / Stirrer (Non-Contact Type)	Using Digital Tachometer by Comparison Method	100 rpm to 1000 rpm	4.63 rpm
115	MECHANICAL- ACCELERATION AND SPEED	Centrifuge / RPM Source/ Stirrer (Non- Contact Type)	Using Digital Tachometer by Comparison Method	1000 rpm to 5000 rpm	7.1 rpm
116	MECHANICAL- ACCELERATION AND SPEED	Centrifuge /RPM Source/ Stirrer (Non- Contact Type)	Using Digital Tachometer by Comparison Method	5000 rpm to 15000 rpm	10 rpm
117	MECHANICAL- ACCELERATION AND SPEED	RPM Source/ Stirrer (Non-Contact type)	Using Digital Tachometer by Comparison Method	15000 rpm to 90000 rpm	20 rpm





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118	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	>10000 rpm to 15000 rpm	7 rpm
119	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	10 rpm to 100 rpm	1.61 rpm
120	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	100 rpm to 500 rpm	2.5 rpm
121	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	1000 rpm to 5000 rpm	4.8 rpm
122	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	15000 rpm to 20000 rpm	7 rpm
123	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	20000 rpm to 50000 rpm	14 rpm





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124	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	500 rpm to 1000 rpm	4.8 rpm
125	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	5000 rpm to 10000 rpm	5.5 rpm
126	MECHANICAL- ACCELERATION AND SPEED	Tachometer (Non- Contact Type)	Using Digital Tachometer and Variable Drive Source by Comparison Method	50000 rpm to 90000 rpm	15 rpm
127	MECHANICAL- VOLUME	Micropipette (Piston Operated)	Using Micro Weighing Balance (Readability: 0.001 mg) by Gravimetric Method as per ISO 8655:2022 part 6	1 μl to 20 μl	0.029 μΙ
128	MECHANICAL- VOLUME	Micropipette (Piston Operated)	Using Micro Weighing Balance (Readability: 0.001 mg) by Gravimetric Method as per ISO 8655: 2022 part 6	> 100 µl to 1000 µl	0.25 μΙ





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129	MECHANICAL- VOLUME	Micropipette (Piston Operated)	Using Micro Weighing Balance (Readability: 0.001 mg) by Gravimetric Method as per ISO 8655: 2022 part 6	> 20 µl to 100 µl	0.09 μΙ
130	MECHANICAL- VOLUME	Micropipette (Piston Operated)	Using Electronic Weighing Balance (Readability: 0.01 mg) by Gravimetric Method as per ISO 8655:2022 part 6	1 ml to 10 ml	3.0 μΙ
131	MECHANICAL- VOLUME	Pipette & Burette, Syringe (Non- Medical Purpose only)	Using Electronic Weighing Balance (Readability: 0.01 mg) by Gravimetric Method as per ISO 4787: 2021	0.1 ml to 1 ml	0.33 μΙ
132	MECHANICAL- VOLUME	Pipette, Burette, Volumetric Flask & Measuring Cylinder, Beaker, Jar, Test Tube	Using Electronic Weighing Balance (Readability: 0.01 mg) by Gravimetric Method as per ISO 4787: 2021	> 10 ml to 100 ml	5.4 μΙ
133	MECHANICAL- VOLUME	Pipette, Burette, Volumetric Flask and Measuring Cylinder, Syringe (Non Medical Purpose only), Beaker, Jar	Using Electronic Weighing Balance (Readability: 0.01 mg) by Gravimetric Method as per ISO 4787: 2021	> 1 ml to 10 ml	0.82 μΙ





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134	MECHANICAL- VOLUME	Volumetric Flask & Measuring Cylinder, Beaker, Jar, Conical Flask and Plastic Flask , Plastic Cylinder, Plastic Beaker and Plastic Conical Flask	Using Electronic Weighing Balance (Readability: 0.01 g) by Gravimetric Method as per ISO 4787: 2021	> 500 ml to 1000 ml	50.5 μΙ
135	MECHANICAL- VOLUME	Volumetric Flask & Measuring Cylinder, Beaker, Jar, Conical Flask and Plastic Flask , Plastic Cylinder, Plastic Beaker and Plastic Conical Flask	Using Electronic Weighing Balance (Readability: 0.001 g) by Gravimetric Method as per ISO 4787: 2021	250 ml to 500 ml	17.5 μΙ
136	MECHANICAL- VOLUME	Volumetric Flask & Measuring Cylinder, Beaker, Jar, Conical Flask and Plastic Flask, Plastic Cylinder, Plastic Beaker and Plastic Conical Flask	Using Electronic Weighing Balance (Readability: 0.001 g) by Gravimetric Method as per ISO 4787: 2021	100 ml to 250 ml	12.1 μΙ
137	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital Balance - Class II and coarser (d = 0.1 g)	Using F1 Class Standard Weights as per OIML R 76-1	0 to 10000 g	0.1 g





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138	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital Weighing Balance - Class I and coarser (d = 0.01 mg)	Using E1 Class Standard Weights as per OIML R 76-1	0 to 60 g	0.021 mg
139	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital Weighing Balance - Class I and coarser (d = 0.1 mg)	Using E1 Class Standard Weights as per OIML R 76-1	0 to 220 g	0.2 mg
140	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital weighing Balance Class II and coarser - (d = 0.1 g)	Using E2 and F1 Class Standard Weight as per OIML R 76 -1	0 to 3000 g	0.08 g
141	MECHANICAL- WEIGHING SCALE AND BALANCE	Micro Balance - Class I and coarser (d = 0.001 mg)	Using E1 Class Standard Weights as per OIML R 76-1	0 to 5 g	0.005 mg
142	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balance - Class I and coarser (d = 0.001 g)	Using E1 & E2 Class Standard Weights as per OIML R 76-1	0 to 1000 g	2.4 mg
143	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	1 g	0.0063 mg





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144	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	1 mg	0.002 mg
145	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	10 g	0.02 mg
146	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	10 mg	0.002 mg





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147	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	100 mg	0.005 mg
148	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML -	2 g	0.0063 mg

R-111-1

Balance

R-111-1

Accuracy class E2 &

coarser

Using E1 Class Weights and Micro

Method (ABBA Cycle) as per OIML -

(Readability: 0.001

mg) by Substitution

2 mg





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150	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	20 g	0.030 mg
151	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	20 mg	0.003 mg
152	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	200 mg	0.0063 mg





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153	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	5 g	0.008 mg
154	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	5 mg	0.002 mg
155	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	50 g	0.03 mg





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156	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	50 mg	0.004 mg
157	MECHANICAL- WEIGHTS	Accuracy class E2 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.001 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	500 mg	0.0063 mg
158	MECHANICAL- WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.1 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	100 g	0.11 mg





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159	MECHANICAL- WEIGHTS	Accuracy class F1 & coarser	Using E1 Class Weights and Micro Balance (Readability: 0.1 mg) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	200 g	0.11 mg
160	MECHANICAL- WEIGHTS	Accuracy class F1 & coarser	Using E2 Class Weights and Digital Balance (Readability: 0.001 g) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	500 g	0.9 mg
161	MECHANICAL- WEIGHTS	Accuracy class F2 & coarser	Using F1 Class Weights and Digital Balance (Readability: 0.001 g) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	1000 g	1.2 mg





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162	MECHANICAL- WEIGHTS	Accuracy class F2 & coarser	Using F1 Class Weights and Digital Balance (Readability: 0.01 g) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	2000 g	10 mg
163	MECHANICAL- WEIGHTS	Accuracy class M2 & coarser	Using F1 Class Weights and Digital Balance (Readability: 0.1 g) by Substitution Method (ABBA Cycle) as per OIML - R-111-1	5000 g	91 mg
164	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber, Climatic Chamber, Stability Chamber, Humidity Generator (Muti Position)	Using Minimum Nine Temperature / RH Wireless Data Loggers by Multiposition Calibration Method	20 % rh to 95 % rh @ 25 °C	3.56 % rh
165	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber, Stability Chamber, Climatic Chamber, Humidity Generator (Multi Position)	Using Minimum Nine Temperature / RH Wireless Data Loggers by Multiposition Calibration Method	5 °C to 50 °C @ 50 % rh	1.2 °C





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166	THERMAL- SPECIFIC HEAT & HUMIDITY	Temperature and RH Data Logger, Digital Thermohygrometer, Temperature and RH Indicator with Sensor	RH Sensor with Indicator and	20 % rh to 95 % rh @ 25 °C	2.6 % rh
167	THERMAL- SPECIFIC HEAT & HUMIDITY	Temperature and RH Data Logger, Digital Thermohygrometr, Temperature and RH Indicator with Sensor	RH Sensor with Indicator and	5 °C to 50 °C @ 50 % rh	0.77 °C
168	THERMAL- SPECIFIC HEAT & HUMIDITY	Temperature and RH Indicator with Sensor of Stability Chamber, Humidity Chamber, Humidity Generator, Humidity Calibrator (Single Position)	Using Temperature / RH Indicator with Sensor / Data Logger by Comparison Method	20 % rh to 95 %rh @ 25°C	2.8 %rh
169	THERMAL- SPECIFIC HEAT & HUMIDITY	Temperature and RH Indicator with Sensor of Stability Chamber, Humidity Chamber, Humidity Generator, Humidity Calibrator (Single Position)	Using Temperature/ RH Indicator with Sensor / Data Logger by Comparison Method	5 °C to 50 °C @ 50 % rh	0.9 °C





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170	THERMAL- TEMPERATURE	Incubator / BOD Incubator (For Non Medical Purpose Only), Cold Room, Cold Chamber, Walk in Chamber, Oven, Blast Freezers, Deep Freezer (Multi- position)	Using Minimum Nine RTD Sensors with Data Logger by Multiposition Calibration Method	(-) 10 °C to 5 °C	1.3 °C
171	THERMAL- TEMPERATURE	Glass Thermometer, RTD / Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transmitter	Using Liquid Cold Bath and RTD Sensor with Digital Multimeter by Comparison Method	(-) 40 °C to 25 °C	0.41 °C





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172	THERMAL- TEMPERATURE	Glass Thermometer, RTD / Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transmitter	Using Oil Bath and RTD Sensor with Digital Multimeter by Comparison Method	25 °C to 250 °C	0.7 °C
173	THERMAL- TEMPERATURE	Incubator / BOD Incubator / Autoclave (For Non Medical Purpose Only), Oven, Walk in Chamber (Multi- position)	Using Minimum Nine RTD Sensors with Data Logger by Multiposition Calibration Method	5 °C to 250 °C	1.3 °C
174	THERMAL- TEMPERATURE	Refrigerator (Multi- position)	Using Minimum Nine RTD Sensors with Data Logger by Multiposition Calibration Method	(-) 10 °C to 10 °C	1.3 °C





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175	THERMAL- TEMPERATURE	RTD / Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transmitter	Using Dry Bath, RTD Sensor with Digital Multimeter by Comparison Method	250 °C to 400 °C	0.77 °C
176	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Water Bath, Incubator / BOD (For Non- Medical Purpose Only), Oven, Deep Freezer, Cold Chamber, Walk in Oven / Chamber, Tray Dryer, Blast Freezer, Refrigerator, Temperature Bath (Single Position)	Using RTD Sensor with Digital Multimeter by Comparison Method	(-) 40 °C to 10 °C	0.73 °C





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177	THERMAL- TEMPERATURE	Temperature Indicator with Sensor Water Bath, Incubator / BOD Incubator (For Non medical purpose only), Oven, Walk in Oven / Chamber, Tray Dryer (Single Position)	Using RTD Sensor with Digital Multimeter by Comparison Method	25 °C to 250 °C	0.73 °C
178	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Oven, Furnace, High Temperature Bath (Single Position)	Using S Type Thermocouple with Digital Multimeter by Comparison Method	250 °C to 1000 °C	2.95 °C
179	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Water Bath, Incubator, BOD, Oven, Cold Chamber, Walk in Oven / Chamber, Tray Dryer, Temperature Bath (For Non-Medical Purpose Only) - Single Position	Using RTD Sensor with Digital Multimeter by Comparison Method	10 °C to 25 °C	0.73 °C





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180	THERMAL- TEMPERATURE	Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transducer with Thermocouple	Using Dry Bath and S type Thermocouple with Digital Multimeter by Comparison Method	600 °C to 1000 °C	2.95 °C
181	THERMAL- TEMPERATURE	Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transducer with Thermocouple	Using Dry Bath and S Type Thermocouple with Digital Multimeter by Comparison Method	400 °C to 600 °C	2.68 °C





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		2.0	Site Facility		
1	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 μA to 1 mA	0.38 % to 0.22 %
2	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 A to 10 A	0.17 % to 0.38 %
3	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mA to 10 mA	0.22 % to 0.25 %
4	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mA to 100 mA	0.25 % to 0.17 %





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5	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mA to 1 A	0.17 %
6	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using HV Probe with DMM by Direct Method	1 kV to 40 kV	6.6 %
7	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mV to 100 mV	0.56 % to 0.12 %
8	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mV to 10 mV	5.2 % to 0.56 %
9	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 V to 10 V	0.11 %





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10	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 V to 100 V	0.11 % to 0.15 %
11	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mV to 1 V	0.12 % to 0.11 %
12	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz, 60 Hz and 1 kHz	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 V to 750 V	0.15 % to 0.12 %
13	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	1 mA to 10 mA	0.18 %
14	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	10 mA to 100 mA	0.18 %





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15	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	100 mA to 1 A	0.18 %
16	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	200 μA to 1 mA	0.19 %
17	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz	Using 5½ Multifunction Calibrator by Direct Method	1 A to 10 A	0.18 % to 0.20 %
18	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC High Current @ 50 Hz	Using 5½ Multifunction Calibrator and Current Coil by Direct Method	20 A to 1000 A	1.1 %
19	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	10 V to 100 V	0.171 %
20	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	1 V to 10 V	0.171 %





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21	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	10 mV to 100 mV	0.22 % to 0.171 %
22	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	100 mV to 1 V	0.171 %
23	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	100 V to 750 V	0.171 % to 0.17 %
24	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	5 mV to 10 mV	0.36 % to 0.22 %
25	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ 50 Hz to 1 kHz	Using 5½ Multifunction Calibrator by Direct Method	750 V to 1000 V	0.17 %
26	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	1 μF to 10 μF	1.2 %





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27	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	1 nF to 10 nF	1.2 %
28	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	10 μF to 100 μF	1.2 % to 1.3 %
29	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	10 nF to 100 nF	1.2 %
30	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance @ 1 kHz	Using Decade Capacitance Box by Direct Method	100 nF to 1000 nF	1.2 %
31	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	1 mH to 10 mH	1.3 %
32	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	10 mH to 100 mH	1.3 % to 1.2 %





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33	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	100 μH to 1000 μH	1.7 % to 1.3 %
34	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance @ 1 kHz	Using Decade Inductance Box by Direct Method	100 mH to 1000 mH	1.2 %
35	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mA to 1 A	0.065 % to 0.13 %
36	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 A to 10 A	0.13 % to 0.19 %
37	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mA to 10 mA	0.13 % to 0.081 %
38	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 μA to 100 μA	1.19 % to 0.14 %





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39	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mA to 100 mA	0.081 % to 0.065 %
40	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 μA to 1 mA	0.14 % to 0.13 %
41	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Probe with Digital Multimeter by Direct Method	1 kV to 40 kV	6.6 %
42	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	0.1 mV to 1 mV	4.15 % to 0.43 %
43	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 mV to 10 mV	0.43 % to 0.048 %
44	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	1 V to 10 V	0.017 %





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45	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 mV to 100 mV	0.048 % to 0.019 %
46	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	10 V to 100 V	0.017 % to 0.018 %
47	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 mV to 1 V	0.019 % to 0.017 %
48	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by Direct / Comparison Method	100 V to 1000 V	0.018 % to 0.019 %
49	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Low Resistance (4 Wire)	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by V/I Method	1 mohm to 10 mohm	0.13 %
50	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Low Resistance (4 Wire)	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by V/I Method	10 mohm to 100 mohm	0.13 %





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51	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Low Resistance (4 Wire)	Using 6½ Digit Digital Multimeter and Multifunction Calibrator by V/I Method	100 mohm to 1000 mohm	0.13 %
52	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (2 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	1 Mohm to 10 Mohm	0.013 % to 0.047 %
53	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (2 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	10 Mohm to 100 Mohm	0.047 % to 0.95 %
54	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	1 kohm to 10 kohm	0.013 %
55	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	1 ohm to 10 ohm	0.46 % to 0.06 %
56	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	10 kohm to 100 kohm	0.013 %





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57	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	10 ohm to 100 ohm	0.06 % to 0.016 %
58	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	100 kohm to 1 Mohm	0.013 %
59	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 6½ Digit Digital Multimeter by Direct Method	100 ohm to 1 kohm	0.016 % to 0.013 %
60	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	1 A to 10 A	0.115 % to 0.15 %
61	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	1 mA to 10 mA	0.11 % to 0.114 %
62	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	10 mA to 100 mA	0.114 %





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63	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	100 μA to 1 mA	0.114 % to 0.11 %
64	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using 5½ Multifunction Calibrator by Direct Method	100 mA to 1 A	0.114 % to 0.115 %
65	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Current	Using 5½ Multifunction Calibrator and Current Coil by Direct Method	20 A to 1000 A	1.25 % to 0.99 %
66	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	1 mV to 10 mV	0.16 % to 0.115 %
67	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	1 V to 10 V	0.113 %
68	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	10 mV to 100 mV	0.115 %





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69	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	10 V to 100 V	0.113 %
70	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	100 mV to 1 V	0.115 % to 0.113 %
71	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using 5½ Multifunction Calibrator by Direct Method	100 V to 1000 V	0.113 % to 0.114 %
72	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Low Resistance Box by Direct Method	10 mohm to 100 mohm	2.90 % to 1.81 %
73	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Low Resistance Box by Direct Method	100 mohm to 1000 mohm	1.81 % to 0.43 %
74	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Decade Resistance Box by Direct Method	1 Mohm to 10 Mohm	0.13 %





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75	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Decade Resistance Box by Direct Method	10 Mohm to 100 Mohm	0.13 % to 1.15 %
76	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Decade Resistance Box by Direct Method	100 Mohm to 1000 Mohm	1.15 % to 2 %
77	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	1 kohm to 10 kohm	0.13 %
78	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	1 ohm to 10 ohm	1.25 % to 0.17 %
79	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	10 kohm to 100 kohm	0.13 %
80	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	10 ohm to 100 ohm	0.17 % to 0.12 %





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81	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	using Decade Resistance Box by Direct Method	100 kohm to 1 Mohm	0.13 %
82	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Decade Resistance Box by Direct Method	100 ohm to 1 kohm	0.12 % to 0.13 %
83	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	RTD PT-100	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 600 °C	0.39 °C
84	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type B	Using 6½ Digit Digital Multimeter by Direct Method	450 °C to 1800 °C	1.2 °C
85	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type E	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1000 °C	0.52 °C
86	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type J	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1200 °C	0.34 °C





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87	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type K	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1370 °C	0.36 °C
88	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type N	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 1300 °C	0.47 °C
89	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type R	Using 6½ Digit Digital Multimeter by Direct Method	0 to 1750 °C	1.18 °C
90	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type S	Using 6½ Digit Digital Multimeter by Direct Method	0 to 1750 °C	1.18 °C
91	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Thermocouple Type T	Using 6½ Digit Digital Multimeter by Direct Method	(-) 200 °C to 400 °C	0.36 °C
92	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	RTD PT-100	Using Universal Calibrator by Direct Method	(-) 200 °C to 600 °C	0.4 °C





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93	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type B	Using Universal Calibrator by Direct Method	450 °C to 1800 °C	0.59 °C
94	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type E	Using Universal Calibrator by Direct Method	(-) 200 °C to 1000 °C	0.36 °C
95	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type J	Using Universal Calibrator by Direct Method	(-) 200 °C to 1200 °C	0.36 °C
96	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type K	Using Universal Calibrator by Direct Method	(-) 200 °C to 1370 °C	0.36 °C
97	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type N	Using Universal Calibrator by Direct Method	(-) 200 °C to 1300 °C	0.37 °C
98	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type R	Using Universal Calibrator by Direct Method	0 to 1750 °C	0.59 °C





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99	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type S	Using Universal Calibrator by Direct Method	0 to 1750 °C	0.59 °C
100	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Thermocouple Type T	Using Universal Calibrator by Direct Method	(-) 200 °C to 400 °C	0.36 °C
101	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Digital Multimeter by Direct Method	10 Hz to 50 Hz	0.12 %
102	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Digital Multimeter by Direct Method	50 Hz to 10 kHz	0.12 %
103	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	1 s to 10 s	0.12 s to 0.23 s
104	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	10 s to 60 s	0.23 s to 0.52 s





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105	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	18000 s to 36000 s	7.4 s to 13.7 s
106	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	3600 s to 18000 s	1.6 s to 7.4 s
107	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	36000 s to 86400 s	13.7 s to 27 s
108	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Digital Time Calibrator by Comparison Method	60 s to 3600 s	0.52 s to 1.6 s
109	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	10 Hz to 45 Hz	0.036 % to 0.17 %
110	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	100 Hz to 1000 Hz	0.17 %





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111	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	1000 Hz to 10000 Hz	0.17 % to 0.012 %
112	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Calibrator by Direct Method	50 Hz to 100 Hz	0.17 %
113	MECHANICAL- ACCELERATION AND SPEED	Centrifuge / RPM Source / Stirrer (Non-Contact Type)	Using Digital Tachometer by Comparison Method	10 rpm to 100 rpm	1.8 rpm
114	MECHANICAL- ACCELERATION AND SPEED	Centrifuge / RPM Source / Stirrer (Non-Contact Type)	Using Digital Tachometer by Comparison Method	100 rpm to 1000 rpm	4.63 rpm
115	MECHANICAL- ACCELERATION AND SPEED	Centrifuge / RPM Source/ Stirrer (Non- Contact Type)	Using Digital Tachometer by Comparison Method	1000 rpm to 5000 rpm	7.1 rpm
116	MECHANICAL- ACCELERATION AND SPEED	Centrifuge /RPM Source/ Stirrer (Non- Contact Type)	Using Digital Tachometer by Comparison Method	5000 rpm to 15000 rpm	10 rpm
117	MECHANICAL- ACCELERATION AND SPEED	RPM Source/ Stirrer (Non-Contact type)	Using Digital Tachometer by Comparison Method	15000 rpm to 90000 rpm	20 rpm
118	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital Balance - Class II and coarser (d = 0.1 g)	Using F1 Class Standard Weights as per OIML R 76-1	0 to 10000 g	0.1 g





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119	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital Weighing Balance - Class I and coarser (d = 0.01 mg)	Using E1 Class Standard Weights as per OIML R 76-1	0 to 60 g	0.021 mg
120	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital Weighing Balance - Class I and coarser (d = 0.1 mg)	Using E1 Class Standard Weights as per OIML R 76-1	0 to 220 g	0.2 mg
121	MECHANICAL- WEIGHING SCALE AND BALANCE	Digital weighing Balance Class II and coarser - (d = 0.1 g)	Using E2 and F1 Class Standard Weight as per OIML R 76 -1	0 to 3000 g	0.08 g
122	MECHANICAL- WEIGHING SCALE AND BALANCE	Micro Balance - Class I and coarser (d = 0.001 mg)	Using E1 Class Standard Weights as per OIML R 76-1	0 to 5 g	0.005 mg
123	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balance - Class I and coarser (d = 0.001 g)	Using E1 & E2 Class Standard Weights as per OIML R 76-1	0 to 1000 g	2.4 mg
124	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber, Climatic Chamber, Stability Chamber, Humidity Generator (Muti Position)	Using Minimum Nine Temperature / RH Wireless Data Loggers by Multiposition Calibration Method	20 % rh to 95 % rh @ 25 °C	3.56 % rh





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125	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber, Stability Chamber, Climatic Chamber, Humidity Generator (Multi Position)	Using Minimum Nine Temperature / RH Wireless Data Loggers by Multiposition Calibration Method	5 °C to 50 °C @ 50 % rh	1.2 °C
126	THERMAL- SPECIFIC HEAT & HUMIDITY	Temperature and RH Indicator with Sensor of Stability Chamber, Humidity Chamber, Humidity Generator, Humidity Calibrator (Single Position)	Using Temperature / RH Indicator with Sensor / Data Logger by Comparison Method	20 % rh to 95 %rh @ 25°C	2.8 %rh
127	THERMAL- SPECIFIC HEAT & HUMIDITY	Temperature and RH Indicator with Sensor of Stability Chamber, Humidity Chamber, Humidity Generator, Humidity Calibrator (Single Position)	Using Temperature/ RH Indicator with Sensor / Data Logger by Comparison Method	5 °C to 50 °C @ 50 % rh	0.9 °C
128	THERMAL- TEMPERATURE	Incubator / BOD Incubator (For Non Medical Purpose Only), Cold Room, Cold Chamber, Walk in Chamber, Oven, Blast Freezers, Deep Freezer (Multi- position)	Using Minimum Nine RTD Sensors with Data Logger by Multiposition Calibration Method	(-) 10 °C to 5 °C	1.3 °C





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129	THERMAL- TEMPERATURE	Glass Thermometer, RTD / Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transmitter	Using Liquid Cold Bath and RTD Sensor with Digital Multimeter by Comparison Method	(-) 40 °C to 25 °C	0.41 °C
130	THERMAL- TEMPERATURE	Glass Thermometer, RTD / Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transmitter	Using Oil Bath and RTD Sensor with Digital Multimeter by Comparison Method	25 °C to 250 °C	0.7 °C
131	THERMAL- TEMPERATURE	Incubator / BOD Incubator / Autoclave (For Non Medical Purpose Only), Oven, Walk in Chamber (Multi- position)	Using Minimum Nine RTD Sensors with Data Logger by Multiposition Calibration Method	5 °C to 250 °C	1.3 °C





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132	THERMAL- TEMPERATURE	Refrigerator (Multi- position)	Using Minimum Nine RTD Sensors with Data Logger by Multiposition Calibration Method	(-) 10 °C to 10 °C	1.3 °C
133	THERMAL- TEMPERATURE	RTD / Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transmitter	Using Dry Bath, RTD Sensor with Digital Multimeter by Comparison Method	250 °C to 400 °C	0.77 °C
134	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Water Bath, Incubator / BOD (For Non- Medical Purpose Only), Oven, Deep Freezer, Cold Chamber, Walk in Oven / Chamber, Tray Dryer, Blast Freezer, Refrigerator, Temperature Bath (Single Position)	Using RTD Sensor with Digital Multimeter by Comparison Method	(-) 40 °C to 10 °C	0.73 °C





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135	THERMAL- TEMPERATURE	Temperature Indicator with Sensor Water Bath, Incubator / BOD Incubator (For Non medical purpose only), Oven, Walk in Oven / Chamber, Tray Dryer (Single Position)	Using RTD Sensor with Digital Multimeter by Comparison Method	25 °C to 250 °C	0.73 °C
136	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Oven, Furnace, High Temperature Bath (Single Position)	Using S Type Thermocouple with Digital Multimeter by Comparison Method	250 °C to 1000 °C	2.95 °C
137	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Water Bath, Incubator, BOD, Oven, Cold Chamber, Walk in Oven / Chamber, Tray Dryer, Temperature Bath (For Non-Medical Purpose Only) - Single Position	Using RTD Sensor with Digital Multimeter by Comparison Method	10 °C to 25 °C	0.73 °C





## SCOPE OF ACCREDITATION

**Laboratory Name:** 

PATWARDHAN'S ULTIMATE CALIBRATION SERVICES LLP, GALA NO 1 & 2, KAMALKUNJ CO-OP HSG SOCIETY, BADLAPUR, THANE, MAHARASHTRA, INDIA

**Accreditation Standard** 

ISO/IEC 17025:2017

**Certificate Number** 

CC-4020

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Validity

21/08/2024 to 20/08/2026

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)(±)
138	THERMAL- TEMPERATURE	Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transducer with Thermocouple	Using Dry Bath and S type Thermocouple with Digital Multimeter by Comparison Method	600 °C to 1000 °C	2.95 °C
139	THERMAL- TEMPERATURE	Thermocouple with or without Indicator / Controller, Temperature Recorder, Temperature Gauge, Digital Thermometer, Temperature Transducer with Thermocouple	Using Dry Bath and S Type Thermocouple with Digital Multimeter by Comparison Method	400 °C to 600 °C	2.68 °C

<sup>\*</sup> CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.