



#### CERTIFICATE OF ACCREDITATION

#### NCL PVT.LTD.

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017** 

# "General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

B.D. NAGAR, MEERUT ROAD, GHAZIABAD, UTTAR PRADESH, INDIA

in the field of

#### **CALIBRATION**

**Certificate Number:** 

**CC-2213** 

**Issue Date:** 

29/01/2022

Valid Until:

28/01/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity: NANY CALIBRATION LABORATORY P LTD

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer





#### **SCOPE OF ACCREDITATION**

**Laboratory Name:** 

NCL PVT.LTD., B.D. NAGAR, MEERUT ROAD, GHAZIABAD, UTTAR PRADESH,

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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)(±)
		20	Permanent Facility		-
1	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @10Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 mA to 10 mA	0.06 % to 0.08 %
2	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @10Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 mA to 100 mA	0.08 % to 0.08 %
3	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @10Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 μA to 1 mA	0.03 % to 0.06 %
4	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @10Hz to 10kHz	Using digital Multimeter 8 1/2 Digit by Direct Method	100 mA to 1 A	0.09 % to 0.041 %





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5	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @10Hz to 5kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 A to 10 A	0.04 % to 0.09 %
6	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @50Hz to 1kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	30 μA to 100 μA	0.2 % to 0.06 %
7	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current @50Hz to 5kHz	Using Digital Multi meter 8 1/2 Digit by Direct Method	10 A to 20 A	0.1 % to 0.2 %
8	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using HVP & DMM by comparison method	1000 V to 30 kV	8.5 %
9	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @50 Hz	Using HVP & DMM By direct method	1000 v to 25 kV	8.51 %





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10	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Power UPF, 50 Hz (-)0.1 PF/0.1 PF to UPF (1-Phase and 3- Phase), 40 V to 600 V,(0.1 A to 20 A)	Using Power Meter AC/DC by Direct Method	0.4 W to 12 kW	0.24 % to 0.09 %
11	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Volatge @10kHz to 100kHz	By Digital Multi Meter 8 ½ Digit By Direct Method	1 mV to 10 mV	0.9 % to 0.04 %
12	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Volatge @10kHz to 100kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 mV to 100 mV	0.04 % to 0.014 %
13	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Volatge @10kHz to 100kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 mV to 1 V	0.014 % to 0.27 %
14	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 100kHz to 1MHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 V to 10 V	5.92 % to 0.27 %





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15	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 100kHz to 1MHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 mV to 100 mV	2.36 % to 0.065 %
16	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 100kHz to 1MHz	By Digital Multi Meter 8 ½ Digit By Direct Method	100 mV to 1 V	0.065 % to 5.92 %
17	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10kHz to 100kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 V to 100 V	0.026 % to 0.065 %
18	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @10 Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 V to 100 V	0.009 % to 0.014 %
19	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @10 Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 mV to 100 mV	0.04 % to 0.053 %





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20	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @10 Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 mV to 1 V	0.009 % to 0.014 %
21	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @10 Hz to 10kHz	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 V to 1000 V	0.009 %
22	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage @50 Hz to 10kHz	Using Digital Multi Meter 8 ½ Digit By Direct Method	1 mV to 10 mV	0.07 % to 0.04 %
23	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage At 10 kHz to 20 kHz	Using Digital Multi Meter 8 ½ Digit by Direct Method	100 V to 1000 V	0.026 % to 0.07 %
24	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	Energy @ 50 Hz, 0.5 PF to UPF) 240 V, 1A to 10A	Using power Meter by Direct Method	0.4wh to 12kWh	2.7 %





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25	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	Power Factor/Phase Angle 50Hz , 240 Volt (Lead & Lag)	Using Power Meter By Direct Method	0.1 pF to 1 pF	0.0029 pF
26	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @45Hz to 100Hz	Using Multi-Product Calibrator with current coil by Direct Method	400 A to 1000 A	0.14 %
27	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 10Hz to 45Hz	Using Multiproduct Calibrator By Direct Method	1.1 A to 2.99 A	0.17 % to 0.23 %
28	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 10Hz to 45Hz	Using Multiproduct Calibrator By Direct Method	1.9 mA to 3.29 mA	0.11 %
29	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 10Hz to 45Hz	Using Multiproduct Calibrator By Direct Method	3.29 mA to 1.1 A	0.11 % to 0.17 %





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30	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 10Hz to 45Hz	Using Multiproduct Calibrator By Direct Method	33 μA to 330 μA	0.14 % to 0.23 %
31	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 10Hz to 45Hz	Using Multiproduct Calibrator By Direct Method	330 μA to 1.9 mA	0.23 % to 0.11 %
32	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method:	1.1 A to 2.99 A	0.07 % to 0.07 %
33	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method	1.9 mA to 3.29 mA	0.14 % to 0.23 %
34	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method:	11 A to 20 A	0.11 % to 0.09 %
35	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method:	2.99 A to 3.3 A	0.07 % to 0.09 %





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36	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method:	3.29 mA to 329 mA	0.14 % to 0.21 %
37	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method:	3.3 A to 11 A	0.09 % to 0.11 %
38	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method:	329 mA to 1.1 A	0.21 % to 0.07 %
39	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method	33 μA to 330 μA	0.1 % to 0.2 %
40	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator By Direct Method	330 μA to 1.9 mA	0.14 % to 0.23 %
41	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @45 Hz to 100 Hz	Using Multi-Product Calibrator with current coil by Direct Method	20 A to 400 A	1.9 %





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42	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10Hz to 45Hz	Using Multi-Product Calibrator By Direct Method	0.33 V to 3 V	0.061 % to 0.065 %
43	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10Hz to 45Hz	Using Multi-Product Calibrator By Direct Method	3 V to 3.3 V	0.065 % to 0.086 %
44	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10Hz to 45Hz	Using Multi-Product Calibrator By Direct Method	3.3 V to 30 V	0.086 % to 0.061 %
45	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10Hz to 45Hz	Using Multi-Product Calibrator By Direct Method	30 mV to 33 mV	0.059 % to 0.058 %
46	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10Hz to 45Hz	Using Multi-Product Calibrator By Direct Method	33 mV to 330 mV	0.059 % to 0.065 %
47	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10kHz to 100kHz	Using Multi-Product Calibrator By Direct Method	0.33 V to 3.3 V	0.08 % to 0.25 %





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48	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10kHz to 100kHz	Using Multi-Product Calibrator By Direct Method	1 mV to 30 mV	0.1 % to 0.4 %
49	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10kHz to 100kHz	Using Multi-Product Calibrator By Direct Method	3.3 V to 33 V	0.08 % to 0.56 %
50	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10kHz to 100kHz	Using Multi-Product Calibrator By Direct Method	30 mV to 330 mV	0.1 % to 0.8 %
51	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10kHz to 100kHz	Using Multi-Product Calibrator By Direct Method	33 V to 100 V	0.08 % to 0.06 %
52	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @45Hz to 10kHz	Using Multi-Product Calibrator By Direct Method	1 mV to 30 mV	0.11 % to 0.14 %
53	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @45Hz to 10kHz	Using Multi-Product Calibrator By Direct Method	3.3 V to 33 V	0.05 % to 0.05 %





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54	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @45Hz to 10kHz	Using Multi-Product Calibrator By Direct Method	30 mV to 330 mV	0.03 % to 0.11 %
55	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @45Hz to 10kHz	Using Multi-Product Calibrator By Direct Method	33 V to 330 V	0.05 6 % to 0.05 %
56	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @45Hz to 10kHz	Using Multi-Product Calibrator By Direct Method	330 V to 1000 V	0.05 6 % to 0.05 %
57	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @10 kHz to 100 kHz	Using Multi-Product Calibrator By Direct Method	33 V to 330 V	0.08 % to 0.06 %
58	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Capacitance	Using Digital Multi Meter 8 ½ Digit by Direct Method	1 nF to 10 nF	0.2 % to 0.05 %
59	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Capacitance	Using Digital Multi Meter 8 ½ Digit By Direct Method	10 μF to 100 μF	0.08 %





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60	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Capacitance	Using Digital Multi Meter 8 ½ Digit by Direct Method	10 μF to 100 uF	0.08 %
61	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Capacitance	Using Digital Multi Meter 8 ½ Digit By Direct Method	10 nF to 100 nF	0.05 % to 0.05 %
62	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Capacitance	Using Digital Multi Meter 8 ½ Digit by Direct Method	<b>100</b> nF to 1 μF	0.05 %
63	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi Meter 8 ½ Digit By Direct Method	1 μA to 10 μA	0.5 % to 0.05 %
64	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi meter 8 1/2 Digit By Direct method	1 μA to 100 μA	0.05 9 % to 0.05 %
65	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using digital Multimeter 8 1/2 Digit by Direct Method	1 A to 10 A	0.024 % to 0.026 %





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66	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi Meter 8 ½ Digit By Direct Method	1 mA to 10 mA	0.05 % to 0.005 %
67	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi meter 8 1/2 Digit by Direct Method	10 A to 30 A	0.026 % to 0.075 %
68	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi Meter 8 ½ Digit by Direct Method	10 mA to 100 mA	0.005 % to 0.005 %
69	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi Meter 8 ½ Digit By Direct Method	100 μA to 1 mA	0.05 % to 0.05 %
70	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi Meter 8 ½ Digit By Direct Method	100 mA to 200 mA	0.005 % to 0.004 %
71	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multi meter 8 1/2 Digit by Direct Method	200 mA to 1 A	0.005 % to 0.024 %





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72	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC High Voltage	Using HVP and DMM By Comparison Method	1000 V to 30 kV	4.45 %
73	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Power 10 V to 1000 V (0.1 A to 20 A)	Using Power Meter AC/DC By Direct Method	0.1 W to 20 KW	0.13 %
74	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Resistance 2 Wire	Using Digital Multi meter 8 1/2 Digit By Direct/Simulation Method	10 M ohm to 100 M ohm	0.002 % to 0.009 %
75	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Resistance 2 Wire	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 ohm to 1 k ohm	0.0009 % to 0.0012 %
76	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Resistance	Using Digital Multi meter 8 1/2 Digit by Direct Method	10 ohm to 100 ohm	0.0059 % to 0.0012 %
77	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 mV to 100 mV	0.025 % to 0.00064 %





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78	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 V to 10 V	0.002 % to 0.00044 %
79	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 V to 100 V	0.00044 % to 0.0007 %
80	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 mV to 1 V	0.0002 % to 0.002 %
81	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 V to 1000 V	0.0007 to 0.007
82	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 2 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 G ohm to 10 G ohm	0.05 % to 0.58 %
83	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 2 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 k ohm to 100 k ohm	0.0011 % to 0.0012 %





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84	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 2 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	1 ohm to 10 ohm	0.058 % to 0.006 %
85	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 2 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 ohm to 100 ohm	0.006 % to 0.0012 %
86	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 2 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 k ohm to 1 M ohm	0.0012 % to 0.0013 %
87	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 2 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	100 M ohm to 1 G ohm	0.58 % to 0.05 %
88	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 4 wire DC	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 ohm to 100 ohm	0.006 % to 0.0011 %
89	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	Resistance 4 wire DC	Using Digital Multi meter 8 1/2 Digit by Direct Method	100 ohm to 1 k ohm	0.0011 % to 0.0012 %





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90	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	1 μA to 100 μA	2.4 % to 0.04 %
91	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	100 μA to 330 μA	0.04 % to 0.025 %
92	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	11 A to 20 A	0.13 %
93	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	2.9 A to 11 A	0.052 % to 0.079 %
94	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator with current coil By Direct Method	20 A to 400 A	0.07 %
95	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	3.3 mA to 33 mA	0.021 %





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96	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC current	Using Multi-Product Calibrator By Direct Method	33 mA to 330 mA	0.021 % to 0.013 %
97	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	330 μA to 3.3 mA	0.025 % to 0.021 %
98	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator By Direct Method	330 mA to 2.9 A	0.044 % to 0.052 %
99	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi-Product Calibrator with current coil By Direct Method	400 A to 1000 A	1.9 %
100	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	1 G ohm	4.6 %
101	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using High resistance Box by Direct Method	1 T ohm	2.3 %





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102	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	10 G ohm	2.3 %
103	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	100 G ohm	2.3 %
104	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	2 G ohm	4.0 %
105	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	20 G ohm	3.6 %
106	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	20 M ohm	3.6 %
107	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	200 G ohm	2.3 %





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108	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	200 M ohm	3.6 %
109	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	500 G ohm	2.3 %
110	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000VDC	Using HV Mega ohm Box by Direct Method	2 M ohm	3.6 %
111	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Power 1 V to 1000 V 0.1 A to 20 A	Using Multi-Product Calibrator by Direct method	0.1 W to 20 KW	0.8 %
112	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 2 wire	Using Multi-Product Calibrator By Direct Method	1 Mohm to 3 Mohm	0.02 % to 0.04 %
113	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 2 wire	Using Multi-Product Calibrator by Direct Method	1 ohm to 1 Mohm	0.073 % to 0.017 %





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114	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC resistance 2 wire	Using Multi-Product Calibrator by Direct Method	10 M ohm to 30 M ohm	0.07 % to 0.12 %
115	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC resistance 2 wire	Using Multi-Product Calibrator by Direct Method	100 Mohm to 300 Mohm	0.1 % to 0.6 %
116	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC resistance 2 wire	Using Multi-Product Calibrator By Direct Method	3 M ohm to 10 M ohm	0.04 % to 0.07 %
117	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC resistance 2 wire	Using Multi-Product Calibrator by Direct Method	30 M ohm to 100 M ohm	0.09 % to 0.1 %
118	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC resistance 2 wire	Using Multi-Product Calibrator Calibrator by Direct Method	300 Mohm to 1000 Mohm	0.6 % to 1.7 %
119	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	1 K ohm	3.5 %





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120	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	1 m ohm	3.5 %
121	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	1 ohm	3.5 %
122	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Multi-Product Calibrator by Direct Method	1 ohm to 1 k ohm	0.073 % to 0.017 %
123	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	10 m ohm	3.5 %
124	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	10 ohm	3.5 %
125	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	100 μ ohm	0.6 %





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126	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 Wire	Using Standard Resistance Box By Direct Method	100 m ohm	3.5 %
127	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	100 ohm	3.5 %
128	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	50 μohm	1.55 %
129	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi-Product Calibrator By Direct Method	1 mV to 330 mV	0.4 % to 0.52 %
130	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi-Product Calibrator By Direct Method	3.3 V to 33 V	0.0060 % to 0.0060 %
131	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi-Product Calibrator By Direct Method	33 V to 330 V	0.0060 % to 0.0066 %





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132	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi-Product Calibrator By Direct Method	330 mV to 3.3 V	0.0069 % to 0.0060 %
133	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi-Product Calibrator By Direct Method	330 V to 1000 V	0.0066 % to 0.0065 %
134	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Inductance	Using Standard Inductance Box by Direct Method	100 μH to 10 H	3.1 %
135	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Power Factor/Phase Angle 50Hz , 240 Volt (Lead & Lag)	Using Power Meter AC/DC by Direct Method	0.1 pF to 1 pF	0.0029 pF
136	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance 2 wire DC	Using Digital Multi Meter 8 ½ Digit By Direct Method	1 M ohm to 10 M ohm	0.001 % to 0.001 %
137	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Bandwidth (Leveling)	Using Multi-Product Calibrator By Direct Method	1 MHz to 600 MHz	3.9 % to 4.1 %





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138	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Horizontal (Time Based)	Using Multi-Product Calibrator By Direct Method	100 ns to 20 ms	0.5 %
139	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Horizontal (Time Based)	Using Multi-Product Calibrator By Direct Method	2 ns to 50 ns	0.05 % to 0.02 %
140	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Horizontal (Time Based)	Using Multi-Product Calibrator By Direct Method	50 ns to 100 ns	0.02 % to 0.03 %
141	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Horizontal (Time Based)	Using Multi-Product Calibrator By Direct Method	20 ms to 1 s	0.5 %
142	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) Square Wave	Using Multi-Product Calibrator by Direct Method	2 mV to 90 mV	1.9 % to 0.39 %
143	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) Square Wave	Using Multi-Product Calibrator by Direct Method	30 V to 55 V	0.11 %





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144	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) Square Wave	Using Multi-Product Calibrator by Direct Method	90 mV to 900 mV	0.39 % to 0.11 %
145	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) Square Wave	Using Multi-Product Calibrator by Direct Method	900 mV to 30 V	0.11 %
146	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) DC voltage	Using Multi-Product Calibrator by Direct Method	1 mV to 2.49 mV	5.5 % to 0.46 %
147	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) DC Voltage	Using Multi-Product Calibrator by Direct Method	11 V to 130 V	0.08 % to 0.07 %
148	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) DC Voltage	Using Multi-Product Calibrator by Direct Method	2.2 V to 11 V	0.3 %
149	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) DC voltage	Using Multi-Product Calibrator by Direct Method	2.49 mV to 500 mV	0.46 % to 0.11 %





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150	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope Vertical (Amplitude) DC voltage	Using Multi-Product Calibrator by Direct Method	500 mV to 2.2 V	0.11 %
151	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Power 50 Hz (-)0.1 PF to UPF 0.1 PF to UPF (1phase & 3 phase) 40 V to 600 V 0.1 A to 20 A	Using Multi-Product Calibrator By Direct Method	0.4 W to 12.0 KW	0.09 % to 0.11 %
152	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Power Factor/Phase Angle 50 Hz (Lead & Lag)	Using Multi-Product Calibrator Calibrator by Direct Method	0.1 pF to 1.0 pF	0.004 pF
153	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Resistance 4 W	Using Standard Resistance Box by Direct Metho	1 mohm, 10 mohm, 100 m ohm to 1 ohm, 10 ohm, 100 ohm, 1k ohm	3.71 % to 1.75 %
154	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records B -Type	Using Digital Multi meter 8 1/2 Digit By Direct/Simulation Method	600 °C to 1800 °C	0.2 °C
155	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records E -Type	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	(-)250 °C to 1000 °C	0.42 °C





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156	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records J-Type	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	(-)200 °C to 1200 °C	0.13 °C
157	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records K -Type	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	(-)200 °C to 1200 °C	0.03 °C
158	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records N -Type	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	(-)200 °C to 1300 °C	0.14 °C
159	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records R -Type	Using Digital Multi meter 8 1/2 Digit By Direct/Simulation Method	0 °C to 1750 °C	0.36 °C
160	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records RTD (PRT-100)	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	(-)200 °C to 800 °C	0.009 °C
161	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records S -Type	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	0 °C to 1750 °C	0.36





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162	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Measure)	Temperature Simulation Temp Indicator/Controller/ Data Logger/Records T -Type	Using Digital Multi Meter 8 ½ Digit By Direct/Simulation Method	(-)250 °C to 400 °C	0.04 °C
163	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator B- Type	Using Multi Product Calibrator by Direct method	600 °C to 1800 °C	0.55 °C
164	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator E- Type	Using Multi-Product Calibrator By direct Method	(-) 250 °C to 1000 °C	0.5 °C
165	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator J-Type	Using Multi-Product Calibrator by Direct Method	(-) 200 °C to 1200 °C	0.2 °C
166	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator K-Type	Using Multi-Product Calibrator by Direct Method	(-) 200 °C to 1200 °C	0.48 °C





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167	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator N- Type	Using Multi-Product Calibrator By direct Method	(-) 200 °C to 1300 °C	0.4 °C
168	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator R Type	Using Multi-Product Calibrator By Direct method	0 °C to 1750 °C	0.5 °C
169	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator RTD (PRT-100)	Using Multi-Product Calibrator By Direct method	(-) 200 °C to 800	0.09 °C
170	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator S Type	Using Multi-Product Calibrator By Direct method	0 °C to 1750 °C	0.5
171	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	Temperature Simulation Temp Indicator/Controller/ Data logger/Recorder/Cali brator T Type	Using Multi-Product Calibrator By Direct Method	(-) 200 °C to 400 °C	0.7





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172	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using Digital Multi Meter 8 ½ Digit By Direct Method	1 kHz to 10 kHz	0.005 % to 0.0006 %
173	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using Digital Multi Meter 8 ½ Digit By Direct Method	1 MHz to 10 MHz	0.005 % to 0.005 %
174	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using Digital Multi meter 8 1/2 Digit By Direct Method	10 Hz to 1 kHz	0.058 %
175	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using Digital Multi Meter 8 ½ Digit By Direct Method	10 kHz to 100 kHz	0.0006 % to 0.0006 %
176	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Digital Multi meter 8 1/2 Digit by direct method	10 MHz to 100 MHz	0.005 % to 0.001 %
177	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using Digital Multi Meter 8 ½ Digit By Direct Method	100 kHz to 1 MHz	0.0006 % to 0.005 %





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178	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	FREQUENCY/PERIOD	Using Digital Multi Meter 8 ½ Digit By Direct Method	10 ns to 0.2 s	0.003 % to 0.05 %
179	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by Direct Method	0.1 s to 3600 s	0.02 s to 4.2 s
180	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by comparison method	18000 s to 86400 s	7.0 s to 77 s
181	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by Direct Method	3600 s to 18000 s	4.2 s to 7 s
182	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency @3V	Using Multi-Product Calibrator by Direct Method	1 kHz to 100 kHz	0.005 % to 0.009 %
183	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency @3V	Using Multi-Product Calibrator by Direct Method	10 Hz to 119 Hz	0.06 % to 0.003 %





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184	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency @3V	Using Multi-Product Calibrator by Direct Method	100 kHz to 1000 kHz	0.009 % to 0.007 %
185	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency @3V	Using Multi-Product Calibrator by Direct Method	1000 kHz to 2 MHz	0.004 % to 0.009 %
186	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency @3V	Using Multi-Product Calibrator by Direct Method	119 Hz to 1 kHz	0.003 % to 0.006 %
187	FLUID FLOW- FLOW MEASURING DEVICES	Gas flow meter, Air Flow meter, rotameter, flow transmitter, flow switch.	Using LGFC Gas flow calibrator by comparison method:	0.1 LPM to 30 LPM	3.0 %
188	FLUID FLOW- FLOW MEASURING DEVICES	Gas flow meter, Air Flow meter, rotameter, flow transmitter, flow switch.	Using Orifice Gas Flow Calibrator by comparison method	30 LPM to 300 LPM	3 %
189	MECHANICAL- ACCELERATION AND SPEED	Tachometer Contact type	Using Tachometer ,Tachometer calibrator by comparison method	10 rpm to 5000 rpm	2.3 % rdg





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190	MECHANICAL- ACCELERATION AND SPEED	Tachometer Non - Contact Type	Using Tachometer ,Tachometer calibrator by comparison method:	>5000 rpm to 90,000 rpm	4.7 % rdg
191	MECHANICAL- ACCELERATION AND SPEED	Tachometer non contact type	Using Tachometer ,Tachometer calibrator by comparison method	10 rpm to 5000 rpm	2.3 % rdg
192	MECHANICAL- ACCELERATION AND SPEED	Tachometer Calibrator/Strobosco pe/RPM Meter/Centrifuge	Using Digital Tachometer ,Tachometer calibrator (Non Contact) by comparison method:	10 rpm to 1000 rpm	4.5 %
193	MECHANICAL- ACCELERATION AND SPEED	Tachometer Calibrator/Strobosco pe/RPM Meter/Centrifuge	Using Digital Tacometer (non Contact) by comparison method	1000 rpm to 90,000 rpm	1.2 %
194	MECHANICAL- ACCELERATION AND SPEED	Tachometer Calibrator/Strobosco pe/RPM Meter/Centrifuge (contact type)	Using Digital Tachometer by comparison method:	10 rpm to 1000 rpm	4.5 %
195	MECHANICAL- ACOUSTICS	Sound Level Meter @ 998.68 Hz	Using Sound Level Calibrator by Comparison Method	94dB	0.6 dB
196	MECHANICAL- ACOUSTICS	Sound Level Meter @998.73 Hz	Using Sound Level Calibrator by Comparison Method	114 dB	0.6 dB





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197	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bevel Protector, Angle Protector, Combination Set. L.C 1 min	Using Angle Gauge Set. by Comparison Method	0 to 90 to 0 °	4 min.
198	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Gauge Travel only( 0-1 mm) L.C.:- 0.001 mm	Using Universal Length Measuring Machine by Comparison Method	0 to 1 mm	1.5 [77]
199	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper ( Dial / Digital / Vernier Caliper ) L.C. :- 0.01 mm	Using Slip Gauge Set.& Steel Gauge Block with Accessories by Comparison Method	0 to 600mm	10.0 μm
200	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper ( Dial / Digital / Vernier Caliper ) L.C. :- 0.01 mm	Using Slip Gauge Set & Steel Gauge Block with Accessories by Comparison Method	0 mm to 1000 mm	12 μm
201	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper Checker	Using Slip Gauge Set , Long Gauge Block & Dial Test Indicator by Comparison Method	0 to 600 mm	8.2 [11]





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202	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge L.C 0.1μm	Using Standard Foils by Comparison Method	0 to 700 μm	4 um
203	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Comparator Stand Flatness	Using Electronic Level by Comparison Method	300X300 mm	6 μm
204	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cube Mould	Using Digimatic Caliper by comparison method	300 x to 300 mm	90.5 μm
205	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Caliper L.C.:-0.01 mm	Using Slip Gauge Set. by Comparison Method	0 to 300 mm	11.2
206	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer L.C.:-0.001mm	Using Slip Gauge Set & Steel Gauge Block by Comparison Method	0 to 300 mm	3 100





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207	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge ( Lever Type ) L.C.:- 0.001 mm	Using Universal Length Measuring Machine by Comparison Method	0 to 2 mm	1.5 100
208	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge ( Plunger Type ) L.C 0.001mm	Using Universal Length Measuring Machine by Comparison Method	0 to 100 mm	1.5
209	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dig./Dial Thickness Tester L.C. :- 0.001 mm	Using Slip Gauge Set by Comparison Method	0 to 50 mm	1.0 00
210	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ext. Micrometer , L.C. :- 0.001mm	Using Slip Gauge Set. by Comparison Method	0 to 100 mm	1.6 1111
211	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ext. Micrometer , L.C. :- 0.001mm	Using Slip Gauge Set & Steel Gauge Block by Comparison Method	100 mm to 300 mm	2.5 [11]





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212	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ext. Micrometer , L.C. :- 0.001mm	Using Slip Gauge Set & Steel Gauge Block by Comparison Method	300 mm to 500 mm	9 📶
213	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ext. Micrometer , L.C. :- 0.01mm	Using Slip Gauge Set & Steel Gauge Block by Comparison Method	500 mm to 1000 mm	14 117
214	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Using Universal Length Measuring Machine by Comparison Method	up to 1 mm	1.19 <b>m</b>
215	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge L.C. :- 0.01 mm	Using Using Slip Gauge Set , Steel Gauge Block ,Dial Test Indicator with Accessories by Comparison Method	0 to 1000 mm	15 117
216	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge L.C. :- 0.01 mm	Using Slip Gauge Set , Long Slip Block & Dial Test Indicator With Acc. by Comparison Method	0 to 300 mm	8 μm





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217	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge L.C. :- 0.01 mm	Using Using Slip Gauge Set , Steel Gauge Block ,Dial Test Indicator with Accessories by Comparison Method	0 to 600 mm	12 μm
218	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Guuge L.C. :- 0.01 mm	Using Slip Gauge Set , Long Slip Block & Dial Test Indicator With Acc. by Comparison Method	0 to 450 mm	10 🚾
219	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Dial Caliper L.C 0.005mm	Using Slip Gauge Set. with Accessories by Comparison Method	5 mm to 300 mm	9 🔤
220	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micrometer Two Jaw & Sticks Type L.C.:-0.001mm	Using Slip Gauge Set with slip Accessories by Comparison Method	5 mm to 50 mm	1.4 [17]
221	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micrometer Two Jaw & Sticks Type L.C.:-0.001mm	Using Slip Gauge Set with slip Accessories by Comparison Method	50 mm to 300 mm	3 <u>um</u>





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222	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micrometer Two Jaw & Sticks Type L.C.:-0.01mm	Using Using Slip Gauge Set , Steel Gauge Block , with Accessories by Comparison Method	300 mm to 1000 mm	19 μm
223	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Linear Height Gauge L.C.:- 0.0001 mm	Using Using Slip Gauge Set , Steel Gauge Block , with Accessories by Comparison Method	0 to 1000 mm	6.67
224	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micro Meter Setting rods / Lenght bar	Using Universal Length Measuring Machine by Comparison Method	up to 100 mm	1.3 μm
225	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Rods/Length	Using Universal Length Measuring Machine & Long Slip Gauge. by Comparison Method	200 mm to 300 mm	3.5 μm
226	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Rods/Length Bar	Using Universal Length Measuring Machine & Long Slip Gauge. by Comparison Method	100 mm to 200 mm	2.5





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227	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pin Gauge	Using Universal Length Measuring Machine by Comparison Method	0.5 mm to 10 mm	0.9 μm
228	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pin Gauge	Using Universal Length Measuring Machine by Comparison Method	10 mm to 20 mm	1.18 [17]
229	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauges / Air Plug Gauges ( GO & NOGO	Using Universal Length Measuring Machine by Comparison Method	1. 5 mm to 100 mm	3.3 μm
230	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauges / Air Plug Gauges ( GO & NOGO	Using Universal Length Measuring Machine by Comparison Method	100 mm to 200 mm	3.5 117
231	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauge	Using Profile Projector by comparison method	0.25 mm to 40 mm	10.2 μm





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232	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Setting Ring Gauge	Using Universal Length Measuring Machine by Comparison Method	100 mm to 200 mm	4 um
233	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Setting Ring Gauge	Using Universal Length Measuring Machine by Comparison Method	3 mm to 100 mm	3.3
234	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge ( GO & NOGO )	Using Slip Gauge Set by Comparison Method	100 mm to 200 mm	4 um
235	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge ( GO & NOGO )	Using Slip Gauge Set by Comparison Method	3 mm to 100 mm	2 100
236	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Spline Plug Gauge	Using ULM & Measuring Pin Set & By Direct Method	up to 100 mm	1.5 mm





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237	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Spline Ring Gauge (BPD Measurement)	Using ULM & Measuring Pin Set & By Direct Method	up to 50 mm	1.43 μm
238	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Sprit Level/Block Level L.C 0.02 mm/Mtr	Using Electronic Level & Tilting Table & By Comparison Method	0 mm to 150 mm	13.26 μm
239	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge ( Parallelism )	Using Dial Test Indicator & Slip Gauge Set. by Comparison Method	0 to 500 mm	11 μm
240	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge (Straightness )	Using Dial Test Indicator & Slip Gauge Set. by Comparison Method:	0 to 500 mm	11 μm
241	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate	Using Electronic by Comparison Method	up to 2000X2000 mm	1.81 vL+W/150 (L+W in mm )





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242	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Tape Calibrator L.C - 0.0001 mm	Using Slip gauges, long slip gauges by comparison method	0 mm to 1000 mm	6.71 μm
243	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Scale	Using Profile Projector by comparison method	1 mm to 30 mm	65.6 μm
244	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Foils	Using Universal Length Measuring Machine by Comparison Method	0 to 2 mm	0.9
245	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Mandrel ( Run out )	Using Universal Length Measuring Machine & Dial Test Indicator by Comparison Method	up to 150 mm	2.6 μm
246	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Mandrel (Diameter )	Using Universal Length Measuring Machine & Dial Test Indicator by Comparison Method	upto 150mm	2.6 μm





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247	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Seives	Using Digimatic Caliper by comparison method	4 mm to 100 mm	20 μm
248	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves	Using Profile Projector by Comparison Method	32 μm to 4 mm	<b>7</b> μm
249	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge (Angle)	Using Profile Projector by comparison method	0 ° to 60 °	2.33 '
250	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge (pitch)	Using Profile Projector by comparison method	0.25 mm to 20 mm	6.5 μm
251	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge / Wear Check Plug Gauge	Using Universal Length Measuring Machine by Comparison Method	1 mm to 100 mm	2.1 um





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252	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge / Wear Check Plug Gauge	Using Universal Length Measuring Machine by Comparison Method	100 mm to 200 mm	3 1111
253	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge / Wear Check Ring Gauge	Using Universal Length Measuring Machine by Comparison Method	3 mm to 100 mm	2.1
254	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Three Wire Set.	Using Universal Length Measuring Machine by Comparison Method	0.17 mm to 6.35 mm	1.1 μm
255	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness Gauge L.C - 0.01 mm	Using Slip Gauge Set by comparison method	0 mm to 200 mm	43.1 μm
256	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Universal Length Measuring Machine / Single Axis Machine	Using Slip Gauge Set by Comparison Method	0 to 100 mm	1.04 μm





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257	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V Block Flatness	Using Digimatic Indicator, test Mandrel and Angle gauge by comparison method	0 to 300 mm	8.45 μm
258	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V Block Parallelism	Using Digimatic Indicator, test Mandrel and Angle gauge by comparison method	0 to 300 mm	8.45 μm
259	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V Block Symmetricity	Using Digimatic Indicator, test Mandrel and Angle gauge by comparison method:	0 to 300 mm	8.45 μm
260	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Welding Fillet gauge (Angular)	Using Profile Projector by comparison method	1 ° to 90 °	3 '
261	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Welding fillet gauge (Linear)	Using Profile Projector by comparison method	0 mm to 60 mm	577.37 μm





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262	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Comparator Stand	Using Dial gauge with stand	150 X150 mm	3.0 μm
263	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	LVDT/Probe with DRO L.C - 0.0001 mm L.C -0.001 mm	Using Universal Length Measuring Machine and slip gauge set by comparison method	0 mm to 100 mm	1.5 μm
264	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	LVDT/Probe with DRO L.C - 0.0001 mm L.C -0.001 mm	Using Universal Length Measuring Machine by comparison method	0 mm to 25 mm	1.1 μm
265	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Measuring Microscope (L.C.:- 0.001 mm / 1 sec.) Angularity	Using Slip Gauge Set. , Long Gauge Block , Angle Gauge & Dig. Caliper by Comparison Method	0 to 360 deg.	1 min.
266	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Measuring Microscope (L.C.:- 0.001 mm / 1 sec.) Magnification	Using Slip Gauge Set & Dig. Caliper by Comparison Method	up to 100 X	9.23 %
267	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Measuring Microscope( L.C.:- 0.001 mm / 1 sec. )Linear	Using Slip Gauge Set. , Long Gauge Block , Angle Gauge & Dig. Caliper by Comparison Method	0 to 300 mm	4.25 μm





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268	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Roughness Specimen	Using Surface Roughness Tester by Comparison Method	0.05 μm ( Ra) to 3.2 μm ( Ra)	7.5 %
269	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Roughness tester	Using Surface Roughness Specimen by Comparison Method	0.05 μm ( Ra) to 3.2 μm ( Ra)	7 ,82 %
270	MECHANICAL- DUROMETER	Rubber Hardness Tester	Using Load Cell with indicator by comparison Method as per ASTM D 2240	0 to 100 Shore ( A&D)	1.3 Shore (A&D)
271	MECHANICAL- MOBILE FORCE MEASURING SYSTEM	Push Pull Gauge (Dial/Digital)	Using Dead Weight Force Measuring Testing machine with Std. Weights by comparison method as per VDI / VDE 2624 Part 2.1	500 N to 2000 N	14 N
272	MECHANICAL- MOBILE FORCE MEASURING SYSTEM	Push pull gauge/Push Pull Meter/Force gauge	using dead weights by direct method as per VDI/VDE 2624 Part 2.1:2008	5 N to 500 N	3.4 N
273	MECHANICAL- PRESSURE INDICATING DEVICES	Barometric pressure indicating devices [Medium - Pneumatic]	Digital Barometric pressure Indicator by comparison method	50 mbar to 1050 mbar	1 mbar





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274	MECHANICAL- PRESSURE INDICATING DEVICES	Low Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers / Magnehelic/Manome ter ) [Medium - Pneumatic]	Using Precision Digital Gauge Comparison Method Based on DKD - R 6-1	0 to 2000 Pa	1.72 Pa
275	MECHANICAL- PRESSURE INDICATING DEVICES	Low Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers / Manometer ) [Medium - Pneumatic]	Using Precision Digital gauges by comparison Method	0 bar to 10 bar	0.0083 bar
276	MECHANICAL- PRESSURE INDICATING DEVICES	Low Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers / Manometer ) [Medium - Pneumatic]	Using Precision Digital Gauges Comparison Method Based on DKD - R 6 - 1	0 to 1 bar	0.0012 bar
277	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure (Absolute) Pressure gauge, pressure calibrator, recorder, logger, modules, Manometer, Transmitter, switch, Barometer [Medium -Pneumatic]	Using Digital manometer (Absolute), by comparison method	50 mbar to 1050 mbar	1 mbar





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278	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium - Hydraulic]	Using Precision Digital Gauge Comparison Method Based on DKD - R 6 - 1	0 to 700 bar	0.14 bar
279	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium -Hydraulic]	Using Precision Digital Gauge Comparison Method Based on DKD - R - 6 - 1	0 to 100 bar	0.09 bar
280	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium -Hydraulic]	Using Precision Digital Gauge Comparison Method Based on DKD - R 6 - 1	0 to 1000 bar	0.25 bar
281	MECHANICAL- PRESSURE INDICATING DEVICES	Vaccumme Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium - Pneumatic]	Using Precision Digital gauge by comparison method	0 bar to (-) 0.90 bar	0.0012 bar
282	MECHANICAL- TORQUE GENERATING DEVICES	Torque Screw Driver Type I - Class D, E Type II - Class D,E & F	Using Digital Torque Sensor with Indicator by Comparison Method as per IS 16906:2018, ISO 6789-1:2017	0.5 Nm to 5 Nm	2.1 %





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283	MECHANICAL- TORQUE GENERATING DEVICES	Torque Wrench ( Type I - Class B & C )	Using Digital Torque Sensor with Indicator by Comparison Method IS 16906:2018, ISO 6789-1:2017	0.5 to 100 Nm	1.7 %
284	MECHANICAL- TORQUE GENERATING DEVICES	Torque Wrench ( Type II - Class A & B )	Using Digital Torque Sensor with Indicator by Comparison Method as per IS 16906:2018, ISO 6789-1:2017	50 to 500 Nm	1.2 %
285	MECHANICAL- TORQUE GENERATING DEVICES	Torque wrench [Type 1 and type 2] class A and B	Using Digital Torque Sensor with Indicator as per IS 16906:2018, ISO 6789-1:2017	500 Nm to 1000 Nm	1.4 %
286	MECHANICAL- TORQUE MEASURING DEVICES	Torque Sensors	By Using Dead Weight Torque measuring system as per BS 7882:2017	0.1 Nm to 200 Nm	0.20 %
287	MECHANICAL- TORQUE MEASURING DEVICES	Torque Sensors	By Using Dead weight Torque measuring System as per BS 7882:2017	200 Nm to 2000 Nm	0.09 %





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288	MECHANICAL- VOLUME	Glassware Pipettes / Burettes	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	0.1 ml to 1 ml	1.37 μΙ
289	MECHANICAL- VOLUME	Glassware Pipettes / Burettes	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	1 ml to 10 ml	0.8 μΙ
290	MECHANICAL- VOLUME	Glassware Pipettes / Burettes	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	10 ml to 50 ml	8.2 μΙ





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291	MECHANICAL- VOLUME	Measuring Cylinder / volumetric flask / Graduated jar / Can / Beaker	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	0.1 ml to 10 ml	3.4 μΙ
292	MECHANICAL- VOLUME	Measuring Cylinder / volumetric flask / Graduated jar / Can / Beaker	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	10 ml to 100 ml	8.2 μΙ
293	MECHANICAL- VOLUME	Measuring Cylinder / volumetric flask / Graduated jar / Can / Beaker	Using Precision Balance resolution 1mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	100 ml to 250 ml	196 μΙ





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294	MECHANICAL- VOLUME	Measuring Cylinder / volumetric flask / Graduated jar / Can / Beaker	Using Precision Balance resolution 1mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	250 ml to 500 ml	1.03 ml
295	MECHANICAL- VOLUME	Measuring Cylinder / volumetric flask / Graduated jar / Can / Beaker	Using Precision Balance resolution 10mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	500 ml to 5000 ml	3.4 ml
296	MECHANICAL- VOLUME	Micropipette	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	10 μl to 100 μl	0.5 μΙ





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297	MECHANICAL- VOLUME	Micropipette	Using Precision Balance resolution 0.01 mg, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	100 μl to 1000 μl	0.6 μΙ
298	MECHANICAL- VOLUME	Micropipette	Using Precision Balance resolution 0.01, reference weights F1 class and Distilled Water of Known Density Gravimetric Method as per IS/ISO 4787:2010	1000 μl to 10 ml	0.8 μΙ
299	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances class I @ Readability = 0.1 mg and Coarser	Using Std. Weights of Accuracy class F1, Based on OIML R-76-1 By comparison method	1 mg to 200 g	0.5 mg
300	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances class II @ Readability = 1 mg and Coarser	Using Standard Weights of Accuracy Class F1 Based on OIML R - 76 - 1 by Comparison Method	0 to 100 g	4.1 mg





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301	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class II @ Readability = 10 mg and Coarser	Using Standard Weights of Accuracy Class F1 Based on OIML R - 76 - 1 by Comparison Method	0 to 1 kg	15 mg
302	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class III @ Readability = 1 g and Coarser	Using Standard Weights of Accuracy Class F1 & F2 Based on OIML R - 76 - 1 by Comparison Method	0 to 100 kg	3.09 g
303	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class III @ Readability = 10 g and Coarser	Using Standard Weights of Accuracy Class F1 , F2 & M1 Based on OIML R - 76 - 1 by Comparison Method	0 to 200 kg	10 g
304	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances class III @ Readability = 10 g and Coarser	Using Standard Weights of Accuracy Class F1 , F2 & M1 Based on OIML R - 76 - 1 by Comparison Method	0 to 300 kg	22.7 g
305	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class III @ Readability = 100 mg and Coarser	Using Standard Weights of Accuracy Class F1 Based on OIML R - 76 - 1 by Comparison Method	0 to 10 kg	300 mg





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306	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	1 g	0.1 mg
307	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 1 mg	1 kg	5 mg
308	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	1 mg	0.02 mg





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309	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	10 g	0.2 mg
310	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	10 mg	0.02 mg
311	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	100 g	0.5 g





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312	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	100 mg	0.05 mg
313	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	2 g	0.12 mg
314	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	2 mg	0.02 mg





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315	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	20 g	0.25 mg
316	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	20 mg	0.03 mg
317	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	200 g	1 mg





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318	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	200 mg	0.06 mg
319	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	5 g	0.16 mg
320	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 10 mg	5 kg	25 mg





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321	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	5 mg	0.02 mg
322	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	50 g	0.3 mg
323	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	50 mg	0.03 mg





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324	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 1 mg	500 g	2.5 mg
325	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 0.01 mg	500 mg	0.08 mg
326	MECHANICAL- WEIGHTS	Weights of Accuracy Class F2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 10 mg	2 kg	10 mg





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327	MECHANICAL- WEIGHTS	Weights of Accuracy Class M2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 1 g	50 kg	1.3 g
328	MECHANICAL- WEIGHTS	Weights of Accuracy Class M2 & Coarser	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 1g	20 kg	1.0 g
329	MECHANICAL- WEIGHTS	Weights of Accuracy Class M2 Coarse	Using Standard Weights of Accuracy Class F1 Substitution Method of Weighing and ABBA Weighing Cycle Based on OIML R111-1 & Precision Balance of Readability, 1 g	10 kg	1.0 g
330	OPTICAL- OPTICAL	Lux meter/Light Meter/Illumination meter	Using Standard Lux meter by comparison method	10 lx to 20000 lx	7.8 %





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331	THERMAL- SPECIFIC HEAT & HUMIDITY	Dial / Digital / Analog Thermo Hygrometer / RH Sensors / with Indicator / Recorder / Data Logger	Using Humidity Chamber & Digital RH & Temperature Indicator with SPRT by Comparison Method	10 %rh to 95 %rh @ 25 °C	1.1 %rh
332	THERMAL- SPECIFIC HEAT & HUMIDITY	Dial / Digital / Analog Thermo Hygrometer / RH Sensors / with Indicator / Recorder / Data Logger	Using Humidity Chamber & Digital RH & Temperature Indicator with SPRT by Comparison Method	6 °C to 55 °C @50 %rh	0.4 °C
333	THERMAL- TEMPERATURE	Black Body Source	Using IR Thermometer (0.95 emissivity)by comparison method	50 °C to 500 °C	3.8 °C
334	THERMAL- TEMPERATURE	IR thermometer/Laser Gun/Pyrometer/Ther mal Imaging Camera (temperature measurement only )	Using Black body source (emissivity 0.95) and IR Thermometer by comparison method	50 °C to 500 °C	3.5 °C
335	THERMAL- TEMPERATURE	RTD" s , Thermocouples With or Without Indicator / Data Logger / Recorder , Temperature Transmitter , Digital Thermometer.	Using SPRT with Temperature Indicator & Drywell Furnace by Comparison Method	(-) <b>25</b> °C to <b>140</b> °C	0.2





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336	THERMAL- TEMPERATURE	RTD" s , Thermocouples With or Without Indicator / Data Logger / Recorder , Temperature Transmitter , Digital Thermometer.	Using SPRT with Temperature Indicator & Drywell Furnace by Comparison Method	<b>150</b> °C to 600 °C	0.5
337	THERMAL- TEMPERATURE	Thermocouples With or Without Indicator / Data Logger / Recorder , Temperature Transmitter , Digital Thermometer	Using " S" type Thermocouple with Temperature Indicator & Drywell Furnace by Comparison Method	600 °C to 1200 °C	1.9





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		1 30	Site Facility		
1	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Current@50 Hz to 1 kHz	Using Digital Multimeter 6 ½ Digit by Direct Method	33 μA to 10 A	0.25
2	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage (1- Phase)	Using High Voltage Divider With DMM by Direct Method	1 kV to 100 kV	2.53 %
3	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50 Hz	Using HVP & DMM by comparison method	1000 V to 30 kV	8.5 %
4	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @50 Hz	Using High Voltage Divider by Direct Method	1 kV to 100 kV	0.8 %





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5	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC High Voltage @50 Hz	Using HVP & DMM By direct method	1000 v to 25 kV	8.51 %
6	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Power UPF, 50 Hz (-)0.1 PF/0.1 PF to UPF (1-Phase and 3- Phase), 40 V to 600 V,(0.1 A to 20 A)	Using Power Meter AC/DC by Direct Method	0.4 W to 12 kW	0.24 % to 0.09 %
7	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage@ 50 Hz to 1 kHz	Using Digital Multimeter 6½ Digit by Direct Method	1 mV to 100 mV	0.9 %
8	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	AC Voltage@ 50 Hz 1 kHz	Using Digital Multimeter 6½Digit by Direct Method	100 mV to 1000 V	0.12 %
9	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	Energy @ 50 Hz, 0.5 PF to UPF) 240 V, 1A to 10A	Using power Meter by Direct Method	0.4wh to 12kWh	2.7 %





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10	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	Energy UPF, 50 Hz (- )0.1 PF to UPF to 0.1 PF (1-Phase and 3- Phase) 40 V to 600 V (0.1 A to 20 A)	Using Power Meter AC/DC by Direct Method	0.4 wh to 12 kWh	0.24 % to 0.09 %
11	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Measure)	Power Factor/Phase Angle 50Hz , 240 Volt (Lead & Lag)	Using Power Meter By Direct Method	0.1 pF to 1 pF	0.0029 pF
12	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @ 50 Hz to 1 kHz	Using Multiproduct Calibrator By Direct Method:	3.3 mA to 3 A	0.3 % to 0.6 %
13	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current @50 Hz to 1 KHz	Using Multi Function Calibrator By Direct Metho	3 mA to 30 mA	0.3 %
14	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current@50 Hz	Using Multi-Product Calibrator with current coil ( 50 turn ) by Direct Method	20 A to 1000 A	1.89 %





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15	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current@50 Hz to 1 kHz	Using Multi-function Calibrator by Direct Method	10 A to 20 A	0.4 % to 0.9 %
16	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current@50 Hz to 1 kHz	Using Multi Function Calibrator by Direct Method	30 µA to 300 µA	3.2 % to 0.6 %
17	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current@50 Hz to 1kHz	Using Multi Function Calibrator by Direct Metho	3 A to 10 A	0.3 % to 0.4 %
18	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Current@50 Hz to 1kHz	Using Multi Function Calibrator by Direct Method	300 μA to 3 mA	0.6 % to 0.3 %
19	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @50 Hz to 1 kHz	Using Multi Function Calibrator by Direct Method	10 mV to 30 mV	1.5 % to 0.66 %
20	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @50 Hz to 1 kHz	Using Multi Function Calibrator by Direct Method	30 mV to 300 mV	0.66 % to 0.02 %





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21	ELECTRO- TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @50 Hz to 1 kHz	Using Multi Function Calibrator by Direct Method	300 mV to 1000 V	0.03 % to 0.02 %
22	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multimeter 6½ Digit by Direct Method	1 μA to 10 μA	3 % to 0.3 6 %
23	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multimeter 6 ½ Digit by Direct Method	10 μA to 100 μA	0.09 %
24	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using Digital Multimeter 6 ½ Digit by Direct Method	100 μA to 10 A	0.09 % to 0.2 %
25	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Divider By Direct Method	1 kV to 100 kV	0.9 %
26	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC High Voltage	Using HVP and DMM By Comparison Method	1000 V to 30 kV	4.45 %





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27	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multimeter 6 ½ Digit by Direct Method	1 mV to 100 mV	0.5 % to 0.01 %
28	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multimeter 6½ Digit by Direct Method	10 V to 1000 V	0.009 % to 0.008 %
29	ELECTRO- TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	Using Digital Multimeter 6½Digit by Direct Method	100 mV to 10 V	0.01 % to 0.009 %
30	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Capacitance	Using Decade Capacitance Box Direct Method	1 nF to 100 μF	0.9 % to 3 %
31	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator by Direct Method	10 µa to 300 µa	1.5 % to 0.13 %
32	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi function Calibrator With Current Coil ( 50 turn ) by Direct Method	20 A to 500 A	1.8 %





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33	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator by Direct Method	3 A to 20 A	0.2 % to 0.9 %
34	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator by Direct Method	3 mA to 30 mA	0.09 % to 0.07 %
35	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator by Direct Method	30 mA to 300 mA	0.07 %
36	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator by Direct Method	300 <sub>µ</sub> a to 3 mA	0.13 % to 0.09 %
37	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator by Direct Method	300 mA to 3 A	0.07 % to 0.2 %
38	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Current	Using Multi function Calibrator With Current Coil ( 50 turn ) by Direct Method	500 A to 1000 A	2 % to 2 .2 %





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39	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	1 G ohm	4.6 %
40	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using High resistance Box by Direct Method	1 T ohm	2.3 %
41	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	10 G ohm	2.3 %
42	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	100 G ohm	2.3 %
43	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	2 G ohm	4.0 %
44	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	20 G ohm	3.6 %





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45	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	20 M ohm	3.6 %
46	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	200 G ohm	2.3 %
47	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	200 M ohm	3.6 %
48	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000 VDC	Using HV mega ohm Box by Direct Method	500 G ohm	2.3 %
49	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC High Resistance 2 wire @0-5000VDC	Using HV Mega ohm Box by Direct Method	2 M ohm	3.6 %
50	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Power 1 V to 600 V 0.1 A - 20 A	Using Multi function Calibrator by Direct Method	0.1 W to 12 KW	0.8 %





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51	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 2 wire	Using Multi-Product Calibrator By Direct Method	1 Mohm to 3 Mohm	0.02 % to 0.04 %
52	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 2 Wire	Using Decade Resistance Box by Direct Method	1 ohm to 1 M ohm	1.3 %
53	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	1 K ohm	3.5 %
54	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	1 m ohm	3.5 %
55	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	1 ohm	3.5 %
56	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	10 m ohm	3.5 %





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57	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	10 ohm	3.5 %
58	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	100 μ ohm	0.6 %
59	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 Wire	Using Standard Resistance Box By Direct Method	100 m ohm	3.5 %
60	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	100 ohm	3.5 %
61	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Resistance 4 wire	Using Standard Resistance Box By Direct Method	50 μohm	1.55 %
62	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi Function Calibrator by Direct Method	1 mV to 30 mV	0.06 % to 1.4 %





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63	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi Function Calibrator by Direct Method	30 mV to 300 mV	0.06 % to 0.03 %
64	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	Using Multi Function Calibrator by Direct method	300 mV to 1000 V	0.02 %
65	ELECTRO- TECHNICAL- DIRECT CURRENT (Source)	Inductance	Using Standard Inductance Box by Direct Method	100 μH to 10 H	3.1 %
66	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Capacitance	Using Digital Multimeter 6 ½ Digit by Direct Method	1 nF to 100 uF	1.17 % to 0.014 %
67	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance	Using Digital Multimeter 6 ½ Digit by Direct Method	1 k ohm to 1 M ohm	0.02 % to 0.01 %
68	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance	Using Digital Multimeter 6 ½ Digit by Direct Method	1 M ohm to 10 M ohm	0.01 % to 0.05 %





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69	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance	Using Digital Multimeter 6 ½ Digit by Direct Method	1 ohm to 10 ohm	0.4 % to 0.05 %
70	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance	Using Digital Multimeter 6 ½ Digit by Direct Method	10 M ohm to 100 M ohm	0.05 % to 1 %
71	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance	Using Digital Multimeter 6 ½ Digit by Direct Method	10 ohm to 1 k ohm	0.04 % to 0.02 %
72	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Measure)	Resistance	Using Digital Multimeter 6 ½ Digit by Direct Method	100 M ohm to 1 G ohm	1 % to 2.3 %
73	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	AC Power , 50 Hz (- )0.1 PF to UPF to 0.1 PF ( 1 & 3 Phase ) 40 V to 600 V 0.1 A to 20 A	Using Multi Function Calibrator by Direct Method	0.4 W to 12 kW	1.76 %
74	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Capacitance	Using Standard Capacitance Box by Direct Method	1 nF to 100 μF	3.5 %





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75	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Power Factor (Lag & Lead ) @50 Hz	Using Multi Function Calibrator by Direct Method	0.1 pF to 1 pF	0.05 pF
76	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Resistance	Using Standard Resistance Box by Direct Method	1 mohm, 10 mohm, 100 mohm to 1 ohm, 10 ohm , 100 ohm, 1kohm	1.4 %
77	ELECTRO- TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Resistance 4 W	Using Multi function Calibrator & Standard Resistance box by Direct Method	1 ohm to 190 Mohm	3.6 %
78	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	J Type (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	(-) 200 °C to 1200 °C	1.2 °C
79	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	K Type (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	(-) 140 °C to 1300 °C	1.4 °C
80	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	N Type (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	0 °C to 1300 °C	1.1 °C





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81	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	R Type (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	600 °C to 1600 °C	1.8 °C
82	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	RTD (PT-100) (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	(-)100 °C to 650 °C	0.41 °C
83	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	S Type (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	0 °C to 1600 °C	1.8 °C
84	ELECTRO- TECHNICAL- TEMPERATURE SIMULATION (Source)	T Type (Indicator/Controller/ Recorder)	Using Multifunction Process Calibrator by Direct Method	0 °C to 400 °C	1.1 °C
85	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Frequency	Using Digital Multimeter 6 ½ Digit by Direct Method	10 Hz to 1 MHz	0.06 % to 0.5 %
86	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by Direct Method	0.1 s to 3600 s	0.02 s to 4.2 s





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87	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by comparison method	18000 s to 86400 s	7.0 s to 77 s
88	ELECTRO- TECHNICAL- TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by Direct Method	3600 s to 18000 s	4.2 s to 7 s
89	ELECTRO- TECHNICAL- TIME & FREQUENCY (Source)	Frequency	Using Multi Function Calibrator by Direct Method	45 Hz to 1000 Hz	0.04 %
90	FLUID FLOW- FLOW MEASURING DEVICES	Dial Flow meter, Digital Flow meter, Flow Transmitter, Flow Switches, flow transducers	By Using Ultrosonic flow meter calibrator by comparison method	1.0 m³/hr to 718 m³/hr	1.5 % rdg
91	FLUID FLOW- FLOW MEASURING DEVICES	Gas flow meter, Air Flow meter, rotameter, flow transmitter, flow switch.	Using LGFC Gas flow calibrator by comparison method:	0.1 LPM to 30 LPM	3.0 %
92	FLUID FLOW- FLOW MEASURING DEVICES	Gas flow meter, Air Flow meter, rotameter, flow transmitter, flow switch.	Using Orifice Gas Flow Calibrator by comparison method	30 LPM to 300 LPM	3 %





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93	MECHANICAL- ACCELERATION AND SPEED	Tachometer Non - Contact Type	Using Tachometer ,Tachometer calibrator by comparison method:	>5000 rpm to 90,000 rpm	4.7 % rdg
94	MECHANICAL- ACCELERATION AND SPEED	Tachometer Calibrator/Strobosco pe/RPM Meter/Centrifuge	Using Digital Tachometer ,Tachometer calibrator (Non Contact) by comparison method:	10 rpm to 1000 rpm	4.5 %
95	MECHANICAL- ACCELERATION AND SPEED	Tachometer Calibrator/Strobosco pe/RPM Meter/Centrifuge	Using Digital Tacometer (non Contact) by comparison method	1000 rpm to 90,000 rpm	1.2 %
96	MECHANICAL- ACCELERATION AND SPEED	Tachometer Calibrator/Strobosco pe/RPM Meter/Centrifuge (contact type)	Using Digital Tachometer by comparison method:	10 rpm to 1000 rpm	4.5 %
97	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bench Centre (Coaxiality)	Using Dig. Indicator ,Taper Mandrel & Standard Mandrel by Comparison Method:	up to 700 mm	12 μm





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98	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bench Centre (Parallelism)	Using Dig. Indicator , Taper Mandrel & Standard Mandrel by Comparison Method	up to 700 mm	12 μm
99	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Comparator Stand Flatness	Using Electronic Level by Comparison Method	300X300 mm	6 μm
100	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cube Mould	Using Digimatic Caliper by comparison method	300 x to 300 mm	90.5 μm
101	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate	Using Electronic by Comparison Method	up to 2000X2000 mm	1.81 vL+W/150 (L+W in mm )
102	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Tape Calibrator L.C - 0.0001 mm	Using Slip gauges, long slip gauges by comparison method	0 mm to 1000 mm	6.71 μm





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103	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Mandrel ( Run out )	Using Universal Length Measuring Machine & Dial Test Indicator by Comparison Method	up to 150 mm	2.6 μm
104	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Mandrel (Diameter )	Using Universal Length Measuring Machine & Dial Test Indicator by Comparison Method	upto 150mm	2.6 μm
105	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Universal Length Measuring Machine / Single Axis Machine	Using Slip Gauge Set by Comparison Method	0 to 100 mm	1.04 μm
106	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Comparator Stand	Using Dial gauge with stand	150 X150 mm	3.0 μm
107	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Measuring Microscope (L.C.:- 0.001 mm / 1 sec.) Angularity	Using Slip Gauge Set. , Long Gauge Block , Angle Gauge & Dig. Caliper by Comparison Method	0 to 360 deg.	1 min.





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108	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Measuring Microscope (L.C.:- 0.001 mm / 1 sec.) Magnification	Using Slip Gauge Set & Dig. Caliper by Comparison Method	up to 100 X	9.23 %
109	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Profile Projector / Measuring Microscope( L.C.:- 0.001 mm / 1 sec. )Linear	Using Slip Gauge Set. , Long Gauge Block , Angle Gauge & Dig. Caliper by Comparison Method	0 to 300 mm	4.25 μm
110	MECHANICAL- PRESSURE INDICATING DEVICES	Barometric pressure indicating devices [Medium - Pneumatic]	Digital Barometric pressure Indicator by comparison method	50 mbar to 1050 mbar	1 mbar
111	MECHANICAL- PRESSURE INDICATING DEVICES	Low Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers / Magnehelic/Manome ter ) [Medium - Pneumatic]	Using Precision Digital Gauge Comparison Method Based on DKD - R 6-1	0 to 2000 Pa	1.72 Pa
112	MECHANICAL- PRESSURE INDICATING DEVICES	Low Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers / Manometer ) [Medium - Pneumatic]	Using Precision Digital gauges by comparison Method	0 bar to 10 bar	0.0083 bar





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113	MECHANICAL- PRESSURE INDICATING DEVICES	Low Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers / Manometer ) [Medium - Pneumatic]	Using Precision Digital Gauges Comparison Method Based on DKD - R 6 - 1	0 to 1 bar	0.0012 bar
114	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure (Absolute) Pressure gauge, pressure calibrator, recorder, logger, modules, Manometer, Transmitter, switch, Barometer [Medium -Pneumatic]	Using Digital manometer (Absolute), by comparison method	50 mbar to 1050 mbar	1 mbar
115	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium - Hydraulic]	Using Precision Digital Gauge Comparison Method Based on DKD - R 6 - 1	0 to 700 bar	0.14 bar
116	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium -Hydraulic]	Using Precision Digital Gauge Comparison Method Based on DKD - R - 6 - 1	0 to 100 bar	0.09 bar
117	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium -Hydraulic]	Using Precision Digital Gauge Comparison Method Based on DKD - R 6 - 1	0 to 1000 bar	0.25 bar





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118	MECHANICAL- PRESSURE INDICATING DEVICES	Vaccumme Gauge ( Dial / Digital / Transmitter / Switch / Transducers ) [Medium - Pneumatic]	Using Precision Digital gauge by comparison method	0 bar to (-) 0.90 bar	0.0012 bar
119	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / Load Testing Machine / Spring Testing Machine / Flexural Testing Machine @ Compression	Using Load Cell with Indicator by Comparison Method as per IS 1828:2015 Part 1	1 kN to 1000 kN	0.80 %
120	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / Load Testing Machine / Spring Testing Machine / Flexural Testing Machine @ Compression	Using Load Cell with Indicator by Comparison Method as per IS 1828:2015 Part 1	1 N to 10 N	0.81 %
121	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / Load Testing Machine / Spring Testing Machine / Flexural Testing Machine @ Compression	Using Load Cell with Indicator by Comparison Method as per IS 1828:2015 Part 1	10 N to 1 kN	0.5 %





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122	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Tension / Universal Testing Machine / Load Testing Machine / Spring Testing Machine / Flexural Testing Machine @ Tension	Using Load Cell with Indicator by Comparison Method as per IS 1828:2015 Part 1	10 N to 1 kN	0.82 %
123	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Tension / Universal Testing Machine / Load Testing Machine / Spring Testing Machine / Flexural Testing Machine@ Tension	Using Load Cell with Indicator by Comparison Method IS 1828:2015 Part 1	1 kN to 100 kN	0.8 %
124	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances class I @ Readability = 0.1 mg and Coarser	Using Std. Weights of Accuracy class F1, Based on OIML R-76-1 By comparison method	1 mg to 200 g	0.5 mg
125	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances class II @ Readability = 1 mg and Coarser	Using Standard Weights of Accuracy Class F1 Based on OIML R - 76 - 1 by Comparison Method	0 to 100 g	4.1 mg
126	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class II @ Readability = 10 mg and Coarser	Using Standard Weights of Accuracy Class F1 Based on OIML R - 76 - 1 by Comparison Method	0 to 1 kg	15 mg





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127	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class III @ Readability = 1 g and Coarser	Using Standard Weights of Accuracy Class F1 & F2 Based on OIML R - 76 - 1 by Comparison Method	0 to 100 kg	3.09 g
128	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class III @ Readability = 10 g and Coarser	Using Standard Weights of Accuracy Class F1 , F2 & M1 Based on OIML R - 76 - 1 by Comparison Method	0 to 200 kg	10 g
129	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances class III @ Readability = 10 g and Coarser	Using Standard Weights of Accuracy Class F1 , F2 & M1 Based on OIML R - 76 - 1 by Comparison Method	0 to 300 kg	22.7 g
130	MECHANICAL- WEIGHING SCALE AND BALANCE	Weighing Balances Class III @ Readability = 100 mg and Coarser	Using Standard Weights of Accuracy Class F1 Based on OIML R - 76 - 1 by Comparison Method	0 to 10 kg	300 mg
131	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Indicator with sensor of Humidity Calibration / Generator , Humidity Chamber (Single Position )	Using Dig. RH Indicator with sensor Temperature Indicator with SPRT Calibration by Comparison Method	10 %rh to 95 %rh @ 25 °C	1.1 %rh





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132	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity/temperatur e Indicator with sensor of Humidity Calibration / Generator , Humidity Chamber (Single position)	Using Dig. RH Indicator with sensor Temperature Indicator with SPRT by Comparison Method	6 °C to 55 °C @ 50 %rh	0.3 °C
133	THERMAL- TEMPERATURE	Black Body Source	Using IR Thermometer (0.95 emissivity)by comparison method	50 °C to 500 °C	3.8 °C
134	THERMAL- TEMPERATURE	Deep freezer, Refrigerator, Oven, BOD incubator, Environmental Chamber, Vacuum Oven, cold store	Using Data Logger with RTD Sensors Multi Position by Comparison Method	(-) 80 °C to 50 °C	1.44
135	THERMAL- TEMPERATURE	Dry Block Furnaces / Muffle Furnace	Using Data Logger with "N" Type Sensors Multi Position by Comparison Method	200 °C to 600 °C	5.5 °C
136	THERMAL- TEMPERATURE	Dry Block Furnaces / Muffle Furnace	Using Data Logger with " N" Type Sensors Multi Position by Comparison Method	600 °C to 1000 °C	8.0 °C





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137	THERMAL- TEMPERATURE	Humidity Indicator with sensor of Humidity calibration/Generato r/Humidity chamber @ Single Position	Using Dig. RH Indicator with sensor Temperature Indicator by Comparison Method	25 %rh to 95 %rh @ 25 °C	1.5 %rh
138	THERMAL- TEMPERATURE	Oven , Vacuum Oven , Aging Oven , BOD Incubator , Incubator , Centrifuge Chamber , Environment Chamber , Furnaces	Using Data Logger with RTD Sensors Multi Position by Comparison Method	50 °C to 250 °C	1.8
139	THERMAL- TEMPERATURE	RTD" s , Thermocouples With or Without Indicator / Data Logger / Recorder , Temperature Transmitter , Digital Thermometer.	Using SPRT with Temperature Indicator & Drywell Furnace by Comparison Method	(-) 25 °C to 140 °C	0.2
140	THERMAL- TEMPERATURE	RTD" s , Thermocouples With or Without Indicator / Data Logger / Recorder , Temperature Transmitter , Digital Thermometer.	Using SPRT with Temperature Indicator & Drywell Furnace by Comparison Method	<b>150 °C to 600 °</b> C	0.5





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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)(±)
141	THERMAL- TEMPERATURE	Temperature Indicator with sensor of Liquid bath , Oven , Dry Block Furnace , Freezers , Auto Clave , BOD Incubator , Environmental Chamber , Hot Plate, Furnaces , Centrifuge (temperature only) @ Single Position	Using SPRT with Temperature Indicator by Comparison Method	(-) 80 °C to 600 °C	0.3
142	THERMAL- TEMPERATURE	Temperature Indicator with sensor of Oven , Dry Block Furnaces / Muffle Furnace (Single Position )	Using "S" type Thermocouple with Temperature Indicator by Comparison Method	600 °C to 1200 °C	1.9
143	THERMAL- TEMPERATURE	Thermocouples With or Without Indicator / Data Logger / Recorder , Temperature Transmitter , Digital Thermometer	Using " S" type Thermocouple with Temperature Indicator & Drywell Furnace by Comparison Method	600 °C to 1200 °C	1.9

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