



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

HI-TECH LABORATORY & SERVICES, SHIVANI COMPLEX, C-4 VIDYA VIHAR, BHOPAL,
BHOPAL, MADHYA PRADESH, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2689

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Validity

20/08/2020 to 19/08/2022

Last Amended on

20/10/2020

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrum	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	1 A to 10 A	0.17 % to 0.39 %
2	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	100 µA to 100 mA	0.25 % to 0.16 %
3	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC High Voltage at 50 Hz	Using HV Probe with Digital Multimeter By Comparison Method	1 kV to 27 kV	3.1%
4	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	1 V to 1000 V	0.20 % to 0.10 %



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5	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	10 mV to 100 mV	0.54 % to 0.12 %
6	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	Resistance	Using 6 1/2 Digital Precision Multimeter (8846A) By Compression Method	100 Ohm to 10 M Ohm	0.05 % to 0.06 %
7	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current @ 50 Hz	Using Multi Product Calibrator 5502E & Current Coil by Direct Method	1 A to 20 A	0.12 % to 0.25 %
8	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current @ 50 Hz	Using Multi Product Calibrator 5502E & Current Coil by Direct Method	30 µA to 1 A	0.54 % to 0.12 %
9	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC High Current @ 50 Hz	Using Multi Product Calibrator 5502E & Current Coil by Direct Method	50 A to 995 A	0.6 % to 1.00 %



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10	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage @ 50 Hz	Using Multi Product Calibrator 5502E by Direct Method	1 mV to 1 V	2.52 % to 0.15 %
11	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage @ 50 Hz	Using Multi Product Calibrator 5502E by Direct Method	1 V to 1000 V	0.15 % to 0.20 %
12	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	Capacitance @ 1 kHz	Using Capacitance Box by Direct Method	10 nF to 10 µF	2 % to 1.5 %
13	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	Inductance @ 1 kHz	Using Inductance Box by Direct Method	100 µH to 10 H	1.2%
14	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 1/2 Digital Precision Multimeter (8846A) & Digital Clamp Meter Direct Method	1 A to 10 A	0.10 % to 0.19 %
15	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 1/2 Digital Precision Multimeter (8846A) & Digital Clamp Meter Direct Method	1 mA to 1 A	0.064 % to 0.10 %



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16	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 1/2 Digital Precision Multimeter (8846A) & Digital Clamp Meter Direct Method	10 μ A to 1 mA	0.36 % to 0.064 %
17	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with Digital Multimeter By Comparison Method	1.0 kV to 39 kV	2.5%
18	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 1/2 Digital Precision Multimeter (8846A) By Direct Method.	1 mV to 10 mV	0.41 % to 0.05 %
19	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 1/2 Digital Precision Multimeter (8846A) By Direct Method	1 V to 1000 V	0.01 % to 0.05 %
20	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 1/2 Digital Precision Multimeter (8846A) By Direct Method	10 mV to 1 V	0.05 % to 0.01 %
21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6 1/2 Digital Precision Multimeter (8846A) By Compression Method	10 M ohm to 1 G ohm	0.05 % to 2.9 %



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22	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6 1/2 Digital Precision Multimeter (8846A) Compression Method	100 m ohm to 10 M ohm	3.5 % to 0.05 %
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator 5502E & Current Coil Direct Method	1 A to 20 A	0.10%
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator 5502E & Current Coil Direct Method	10 μ A to 1 A	0.26 % to 0.10 %
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC High Current	Using Multi Product Calibrator 5502E & Current Coil Direct Method	50 A to 995 A	0.80 % to 1.00 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Resistance Box Direct Method	1 m ohm to 1 Ohm	3.5 % to 0.7 %
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Direct sourcing from MF Calibrator	1 Ohm to 100 Ohm	0.14 % to 0.034 %



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28	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using Multi Product Calibrator 5502E Direct Method	100 Ohm to 1 G Ohm	0.034 % to 1.89 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using Multi Product Calibrator 5502E Direct Method	100 Ohm to 10 M Ohm	0.034 % to 0.7 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator 5502E Direct Method	1 mV to 1 V	0.61 % to 0.058 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator 5502E Direct Method	1 V to 30 V	0.058 % to 0.006 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance Test Voltage up to 5 KV	Mega Ohm Resistance Box up to 5 KV Direct Method	1 G Ohm to 20 G Ohm	1.92 % to 2.36 %
33	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: J-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 190 °C to 600 °C	0.52°C



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34	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: K-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 190 °C to 1200 °C	0.52°C
35	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: R-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	300 °C to 1600 °C	0.76°C
36	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: RTD	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 200 °C to 800 °C	0.45°C
37	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: S-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	100 °C to 1600 °C	0.8°C
38	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: T-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 190 °C to 390 °C	0.52°C
39	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: T-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 400 °C	0.75°C



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40	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: J-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 1200 °C	0.5°C
41	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: K-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 1370 °C	0.5°C
42	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: R-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	0 to 1700 °C	0.85°C
43	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: RTD	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 800 °C	0.4°C
44	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: S-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	0 to 1700 °C	0.9°C
45	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Digital time interval Meter /Counter ,	Using Digital time Interval meter By Compression Method	10 s to 2 hrs.	1 s to 2 s



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46	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator 5502E Direct Method	50 Hz to 100 kHz	0.05 % to 0.04 %
47	MECHANICAL-ACCELERATION AND SPEED	RPM Meter, Speed Indicator, Tachometer (Contact Type)	Using Tachometer & RPM Calibrator by Comparison Method	12 rpm to 10000 rpm	1 rpm to 10 rpm
48	MECHANICAL-ACCELERATION AND SPEED	RPM, Centrifuge Machine, RPM Meter, Speed Indicator, Tachometer (Non-contact)	Using Tachometer by Comparison Method	12 rpm to 20000 rpm	1 rpm to 5 rpm
49	MECHANICAL-ACOUSTICS	Sound Level Meter	Using Acoustic Calibrator by Comparison Method as per IS 15575	114 dB @ 1 kHz	1dB
50	MECHANICAL-ACOUSTICS	Sound Level Meter	Using Acoustic Calibrator by Comparison Method as per IS 15575	94 dB @ 1 kHz	1dB
51	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bevel Protector / Angle Protector / Combination Square Set (L.C.: 5 minute & coarser)	Using Angle Gauges by Comparison Method	0 to 360 °	4minute of arc



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52	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Gauge (Transmission) LC: 1.0 μm & Coarser	Using Length Measuring Machine & Plunger Dial by Comparison Method	0 to 1 mm	3μm
53	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/ Dial/ Digital) L.C. 0.02 mm & Coarser	Using Slip Gauge, Caliper Checker and Length Bar by Comparison Method	0 to 2000 mm	40μm
54	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper - Vernier / Dial / Digital (L.C.: 0.01 mm & Coarser)	Using Slip Gauge, Caliper Checker & Length Bar by Comparison Method	0 to 1000 mm	20μm
55	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Foil	Using Universal length measuring machine by comparison method	0.01 mm to 1 mm	2.0μm
56	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Foil	Using Digital Micrometer	0.01 mm to 1 mm	3.0μm



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57	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge / DFT Meter L.C.: 0.1 µm & Coarser	Using Coating Thickness Foils	0 to 1 µm	7.0µm
58	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cylindrical Measuring Pin	Using Length Measuring Machine by Comparison Method	0.5 mm to 20 mm	2.0µm
59	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge (Vernier/ Dial/ Digital) L.C. 0.01 mm & Coarser	Using Slip Gauges, Caliper Checker, Length Bar & Surface Plate by Comparison Method	0 to 600 mm	22.0µm
60	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer (L.C. 0.01 mm & Coarser)	Using Slip Gauge Block, Length Bars, Caliper Checker & Surface Plate by Comparison Method	0 to 300 mm	12.20µm
61	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial & Digital Thickness Gauge (L.C. 0.01 mm & Coarser)	Using Slip Gauges & Comparator Stand by Comparison Method	0 to 10 mm	7µm



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62	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (L.C. 0.001 mm & Coarser)	Using Slip Gauge Block, Length Bars, Plunger Dial & Comparator Stand by Comparison Method	0 to 100 mm	3.0µm
63	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (L.C. 0.01mm & Coarser)	Using Slip Gauge Block, Length Bars, Plunger Dial & Comparator Stand by Comparison Method	>100 mm to 700 mm	11.0µm
64	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Using Universal Length Measuring machine by Comparison Method	0.01 mm to 1 mm	2.0µm
65	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/ Dial/ Digital ; L.C. 0.01 mm & Coarser)	Using Slip Gauges, Caliper Checker and Length Bar & Surface Plate by Comparison Method	0 to 600 mm	15.0µm
66	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/ Dial/ Digital ; L.C. 0.01 mm & Coarser)	Using Slip Gauges, Caliper Checker and Length Bar & Surface Plate by Comparison Method	600 mm to 1000 mm	20.0µm



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67	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Industrial Templates , Fixture / moulds, Cube Moulds / Le Chatelier Moulds / Vicat Needle / Test Block , Flakiness & Elongation Gauge , Slump Cone , Core Cutter, Width Gauge (ID,OD,Height, Thickness)	Using Digital Caliper By Comparison Method	Up to 300 mm	230µm
68	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Internal Micrometer (L.C. 0.01 mm)	Using Slip Gauge Block, Length Bars, Plunger Dial, Comparator Stand & Surface Plate by Comparison Method	50 mm to 2000 mm	30.50µm
69	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Level Type Dial Gauge & Digital Dial Gauge (L.C. 0.001 mm & Coarser)	Using Universal Length measuring machine / Slip Gauges & Comparator Stand by Comparison Method	0 to 1 mm	2.0µm
70	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Scale (L.C. 1.0 mm & Coarser)	Using Tape & Scale Measuring Machine By Comparison Method	0 to 1000 mm	52.0µm



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71	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Tape / Pi-Tape	Using Tape & Scale Measuring Machine By Comparison Method	0 to 50 meter	52*SQRT(L) μm (where L is length in meter with step of 1 meter)
72	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Piece/ Length Bar/ Height Blocks/ Riser Block	Using Slip Gauge Block, Length Bars, Plunger Dial & Comparator Stand by Comparison Method	>100 mm to 300 mm	8.0μm
73	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Piece/ Length Bar/ Height Blocks/ Riser Block	Using Slip Gauge Block, Length Bars, Plunger Dial & Comparator Stand by Comparison Method	>300 mm to 700 mm	12μm
74	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Piece/ Length Bar/ Height Blocks/ Riser Block	Using Slip Gauge Block, Length Bars, Plunger Dial & Comparator Stand by Comparison Method	25 mm to 100 mm	5.0μm
75	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pistol Caliper (L.C. 0.1 mm)	Using Slip Gauges & Comparator Stand by Comparison Method.	0 to 100 mm	52.0μm



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76	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge / Width Gauge / Setting Master	Using Length Measuring Machine & Slip Gauge by Comparison Method	0.5 mm to 50 mm	2.0µm
77	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge/ OD Master/ Height Block/ Width Gauge/ Measuring	Using Universal Length Measuring Machine / Slip Gauges, Comparator Stand & Plunger Dial Gauge by Comparison Method	0.5 mm to 100 mm	2.0µm
78	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge / Setting Ring Gauge	Universal Length Measuring machine , Master Setting Ring Gauge & by Comparison Method	3 mm to 100 mm	2.0µm
79	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plunger Dial Gauge & Digital Indicator (L.C. 0.001 mm & Coarser)	Using Universal Length Measuring Machine / Slip Gauges & Comparator Stand by Comparison Method	Up to 25 mm	2.0µm



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80	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge / Gap Gauge / Templates	Using Slip Gauge by Comparison Method	3 mm to 100 mm	3µm
81	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge (Straightness / Flatness / Parallelism)	Using Plunger Dial, Surface Plate and Slip Gauge	Up to 1000 mm	15.70µm
82	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieve	Using Digital Caliper by Comparison Method	4 mm to 125 mm	38µm
83	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Measuring Wire	Using Length Measuring Machine by Comparison Method	0.17 mm to 6.35 mm	1.0µm
84	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Major & Effective Diameter)	Using Length Measuring Machine , Slip Gauge & Thred Measuring Wires by Comparison Method	3 mm to 100 mm	2.5µm



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85	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge - Effective Diameter	Using Length Measuring Machine & Master Setting Ring Gauge by Comparison Method	3 mm to 100 mm	2µm
86	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness Gauge / D Meter (L.C.:0.1 mm & Coarser)	Using Slip Gauge by Comparison Method	0 to 100 mm	61µm
87	MECHANICAL-PRESSURE INDICATING DEVICES	Analog & Digital Pressure Indicating Device - Pneumatic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1, ISO 3567 & ISO 27893:	0 to 1 bar	0.007bar
88	MECHANICAL-PRESSURE INDICATING DEVICES	Dial / Digital Pressure Gauge, Manometer Differential Gauge, Pressure Transmitter, Analog / Digital Pressure Indicating Device - Pneumatic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1	(-) 100 mbar to 100 mbar	0.2mbar



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89	MECHANICAL-PRESSURE INDICATING DEVICES	Dial / Digital Pressure Gauge, Pressure Transmitter, Analog & Digital Pressure Indicating Device - Hydraulic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1	0 to 700 bar	0.25bar
90	MECHANICAL-PRESSURE INDICATING DEVICES	Dial / Digital Pressure Indicating Device / Pressure Transmitter / Switch / Indicator / Controller / Recorder / Logger / Manometer / Differential Gauge, Level Gauge - Pneumatic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1	0 to 25 bar	0.009bar
91	MECHANICAL-PRESSURE INDICATING DEVICES	Vacuum Gauge	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1, ISO 3567 & ISO 27893	(-) 0.95 bar to 0	0.007bar



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92	MECHANICAL-VOLUME	Glass Ware- Pipette, Burette, Measuring Cylinder, Flask, Volumetric Flask, Glass Tube , Density Bottle , Beaker	Using Standard weights, Precision Weighing Balance (with readability 0.01 mg) and distilled water of known density as per ISO 8655 (Part 6) & ISO 4787	10 ml to 200 ml	0.10ml
93	MECHANICAL-VOLUME	Glass Ware- Pipette, Burette, Measuring Cylinder, Flask, Volumetric Flask, Glass Tube, Density Bottle & Beaker	Using Standard weights, Precision Weighing Balance (with readability 0.01 mg) and distilled water of known density as per ISO 8655 (Part 6) & ISO 4787	1 ml to 10 ml	0.2µl
94	MECHANICAL-VOLUME	Micro- Pipettes , Syringe (Fixed , Variable & Multi Channel)	Using Standard weights, Precision Weighing Balance (with readability 0.01 mg) and distilled water of known density as per ISO 8655 (Part 6) & ISO 4787	10 µl to 50 µl	0.2µl



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95	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class F2 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	200 g to	3.0mg
96	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class F2 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	5 g to	0.50mg
97	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class F2 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	5 mg to	0.06mg



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98	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class F2 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	50 g to	1.0mg
99	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class F2 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	500 mg to	0.25mg
100	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	1 g to	0.30mg



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101	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	10 g to	0.60mg
102	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	10 mg to	0.06mg
103	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	100 g to	1.6mg



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104	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	100 mg to	0.16mg
105	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of (F2) Class and Precision Balance(Readability 0.001 g) Substitution method of Weighing and 'ABBA' Weighing Cycle	1000 g to	28mg
106	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	2 g to	0.40mg



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107	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of (F2) Class & Precision Balance(Readability 0.001g), Substitution method of Weighing and 'ABBA' Weighing Cycle	2 kg to	40mg
108	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	2 mg to	0.06mg
109	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	20 g to	0.80mg



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110	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of (F2) Class & Precision Balance(Readability 1g), Substitution method of Weighing and 'ABBA' Weighing Cycle	20 kg to	1.15g
111	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	20 mg to	0.08mg
112	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	200 mg to	0.20mg



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113	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of F1 Class & Precision Balance(Readability 0.01 mg), Based on OIML R-111, Substitution method of Weighing and 'ABBA' Weighing Cycle	50 mg to	0.10mg
114	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M1 & Coarser	Using Standard Weights of (F2) Class & Precision Balance(Readability 0.001g), Substitution method of Weighing and 'ABBA' Weighing Cycle	500 g to	10mg
115	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M3 & Coarser	Using Standard Weights of (F2) Class & Precision Balance(Readability 1g), Substitution method of Weighing and 'ABBA' Weighing Cycle	10 kg to	1.15g



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116	MECHANICAL-WEIGHTS	Mass- Weights Accuracy Class M3 & Coarser	Using Standard Weights of (F2) Class & Precision Balance(Readability 1g), Substitution method of Weighing and 'ABBA' Weighing Cycle	5 kg to	1.15g
117	MECHANICAL-WEIGHTS	Weight (Accuracy Class M1 & Coarser)	Using F1 Class Standard Weight & Precision Balance (readability: 0.01 mg) by Substitution Method of ABBA Weighing Cycle as per OIML R-111-1	1 mg to	0.06mg
118	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo-hygrometer, RH Sensor with Data Logger, Indicator of Humidity Chamber	Using Thermo-hygrometer Humidity & Temperature Generator Chamber	20 °C to 40 °C @ 50 %RH	0.55°C
119	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo-hygrometer, RH Sensor with Data Logger, Indicator of Humidity Chamber	Using Thermo-hygrometer digital Make Htc , Humidity & Temperature Generator Chamber	30 %RH to 90 %RH @ 25 °C	2.2%RH
120	THERMAL-TEMPERATURE	IR Thermometer, Laser Gun, Pyrometer	Using IR Thermometer Make Metravi Model MT-2 & Black Body Source	50 °C to 250 °C	3.1°C



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121	THERMAL-TEMPERATURE	RTD (PT-100) / Thermocouple (J, K, R, S) with or without Temperature Indicator / Recorder / Data Logger	Using Standard S-Type Thermocouple, & 6½ DMM with Dry Temperature Blocks by Comparison Method	300 °C to 600 °C	1.8°C
122	THERMAL-TEMPERATURE	RTD (PT-100) / Thermocouple (J, K, R, S) with or without Temperature Indicator / Recorder / Data Logger / Temperature Switch / Temperature Transmitter	Using Standard S-Type Thermocouple, & 6½ DMM with Dry Temperature Blocks by Comparison Method	600 °C to 1200 °C	2.52°C
123	THERMAL-TEMPERATURE	RTD (PT-100) / Thermocouple (J, K, T, R, S) with or without Indicator / Recorder / Data Logger / Temperature Switch / Temperature Transmitter	Using Standard Precision Thermometer with Dry Temperature Blocks by Comparison Method	(-) 30 °C to 100 °C	0.35°C



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124	THERMAL-TEMPERATURE	RTD (PT-100) / Thermocouple (J, K, T, R, S) with or without Temperature Indicator / Recorder / Data Logger / Temperature Switch / Temperature Transmitter	Using Standard Precision thermometer with Dry Temperature Blocks by Comparison Method	100 °C to 300 °C	0.55°C
125	THERMAL-TEMPERATURE	Thermometer - Digital / Dial / Glass	Using RTD 4 Wire with Digital Precision Themometer & Liquid Temperature Bath by Comparison Method	26 °C to 250 °C	0.51°C



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Site Facility					
1	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	1 A to 10 A	0.17 % to 0.39 %
2	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	100 µA to 100 mA	0.25 % to 0.16 %
3	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC High Voltage at 50 Hz	Using HV Probe with Digital Multimeter By Comparison Method	1 kV to 27 kV	3.1%
4	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	1 V to 1000 V	0.20 % to 0.10 %



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5	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage at 50 Hz	Using 6 1/2 Digital Precision Multimeter (8846A) Direct Method	10 mV to 100 mV	0.54 % to 0.12 %
6	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	Resistance	Using 6 1/2 Digital Precision Multimeter (8846A) By Compression Method	100 Ohm to 10 M Ohm	0.05 % to 0.06 %
7	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current @ 50 Hz	Using Multi Product Calibrator 5502E & Current Coil by Direct Method	30 µA to 1 A	0.54 % to 0.12 %
8	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC High Current @ 50 Hz	Using Multi Product Calibrator 5502E & Current Coil by Direct Method	50 A to 995 A	0.6 % to 1.00 %
9	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage @ 50 Hz	Using Multi Product Calibrator 5502E by Direct Method	1 mV to 1 V	2.52 % to 0.15 %



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10	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage @ 50 Hz	Using Multi Product Calibrator 5502E by Direct Method	1 V to 1000 V	0.15 % to 0.20 %
11	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	Capacitance @ 1 kHz	Using Capacitance Box by Direct Method	10 nF to 10 µF	2 % to 1.5 %
12	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	Inductance @ 1 kHz	Using Inductance Box by Direct Method	100 µH to 10 H	1.2%
13	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 1/2 Digital Precision Multimeter (8846A) & Digital Clamp Meter Direct Method	1 A to 10 A	0.10 % to 0.19 %
14	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 1/2 Digital Precision Multimeter (8846A) & Digital Clamp Meter Direct Method	1 mA to 1 A	0.064 % to 0.10 %
15	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 1/2 Digital Precision Multimeter (8846A) & Digital Clamp Meter Direct Method	10 µA to 1 mA	0.36 % to 0.064 %



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16	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with Digital Multimeter By Comparison Method	1.0 kV to 39 kV	2.5%
17	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 1/2 Digital Precision Multimeter (8846A) By Direct Method.	1 mV to 10 mV	0.41 % to 0.05 %
18	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 1/2 Digital Precision Multimeter (8846A) By Direct Method	1 V to 1000 V	0.01 % to 0.05 %
19	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 1/2 Digital Precision Multimeter (8846A) By Direct Method	10 mV to 1 V	0.05 % to 0.01 %
20	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6 1/2 Digital Precision Multimeter (8846A) By Compression Method	10 M ohm to 1 G ohm	0.05 % to 2.9 %
21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6 1/2 Digital Precision Multimeter (8846A) Compression Method	100 m ohm to 10 M ohm	3.5 % to 0.05 %



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22	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator 5502E & Current Coil Direct Method	1 A to 20 A	0.10%
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator 5502E & Current Coil Direct Method	10 μ A to 1 A	0.26 % to 0.10 %
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC High Current	Using Multi Product Calibrator 5502E & Current Coil Direct Method	50 A to 995 A	0.80 % to 1.00 %
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Resistance Box Direct Method	1 m ohm to 1 Ohm	3.5 % to 0.7 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Direct sourcing from MF Calibrator	1 Ohm to 100 Ohm	0.14 % to 0.034 %
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using Multi Product Calibrator 5502E Direct Method	100 Ohm to 1 G Ohm	0.034 % to 1.89 %



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28	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using Multi Product Calibrator 5502E Direct Method	100 Ohm to 10 M Ohm	0.034 % to 0.7 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator 5502E Direct Method	1 mV to 1 V	0.61 % to 0.058 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator 5502E Direct Method	1 V to 30 V	0.058 % to 0.006 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance Test Voltage up to 5 KV	Mega Ohm Resistance Box up to 5 KV Direct Method	1 G Ohm to 20 G Ohm	1.92 % to 2.36 %
32	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: J-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 190 °C to 600 °C	0.52°C
33	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: K-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 190 °C to 1200 °C	0.52°C



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34	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: R-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	300 °C to 1600 °C	0.76°C
35	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: RTD	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 200 °C to 800 °C	0.45°C
36	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: S-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	100 °C to 1600 °C	0.8°C
37	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: T-Type Thermocouple	Using High Precision Digital Thermometer PT100 & Thermocouple base By Direct Method	(-) 190 °C to 390 °C	0.52°C
38	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Temperature Indicator / Controller & Recorder: T-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 400 °C	0.75°C
39	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: J-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 1200 °C	0.5°C



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40	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: K-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 1370 °C	0.5°C
41	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: R-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	0 to 1700 °C	0.85°C
42	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: RTD	Using Multifunction Calibrator 5502E by Direct Method	(-) 200 °C to 800 °C	0.4°C
43	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Indicator / Controller & Recorder: S-Type Thermocouple	Using Multifunction Calibrator 5502E by Direct Method	0 to 1700 °C	0.9°C
44	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Digital time interval Meter /Counter ,	Using Digital time Interval meter By Compression Method	10 s to 2 hrs.	1 s to 2 s
45	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator 5502E Direct Method	50 Hz to 100 kHz	0.05 % to 0.04 %



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46	MECHANICAL-ACCELERATION AND SPEED	RPM, Centrifuge Machine, RPM Meter, Speed Indicator, Tachometer (Non-contact)	Using Tachometer by Comparison Method	12 rpm to 20000 rpm	1 rpm to 5 rpm
47	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieve	Using Digital Caliper by Comparison Method	4 mm to 125 mm	38µm
48	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machine	Using Standard Hardness Blocks as per IS 1586: 2018 by Indirect Method	HRC	1.1HRC
49	MECHANICAL-PRESSURE INDICATING DEVICES	Analog & Digital Pressure Indicating Device - Pneumatic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1, ISO 3567 & ISO 27893:	0 to 1 bar	0.007bar
50	MECHANICAL-PRESSURE INDICATING DEVICES	Dial / Digital Pressure Gauge, Manometer Differential Gauge, Pressure Transmitter, Analog / Digital Pressure Indicating Device - Pneumatic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1	(-) 100 mbar to 100 mbar	0.2mbar



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51	MECHANICAL-PRESSURE INDICATING DEVICES	Dial / Digital Pressure Gauge, Pressure Transmitter, Analog & Digital Pressure Indicating Device - Hydraulic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1	0 to 700 bar	0.25bar
52	MECHANICAL-PRESSURE INDICATING DEVICES	Dial / Digital Pressure Indicating Device / Pressure Transmitter / Switch / Indicator / Controller / Recorder / Logger / Manometer / Differential Gauge, Level Gauge - Pneumatic Pressure	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1	0 to 25 bar	0.009bar
53	MECHANICAL-PRESSURE INDICATING DEVICES	Vacuum Gauge	Using Digital Pressure & Pressure Comparator by Comparison Method as per DKD R-6-1, ISO 3567 & ISO 27893	(-) 0.95 bar to 0	0.007bar



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54	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / CTM / UTM / Uniaxial / Spring / Force Gauge / Flexural Testing Machine (Compression Mode)	Using Force Proving Instruments as per IS 1828 (Part-1): 2015 by Comparison Method	10 kN to 50 kN	0.85%
55	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / CTM / UTM / Uniaxial / Spring / Force Gauge / Flexural Testing Machine (Compression Mode)	Using Force Proving Instruments as per IS 1828 (Part-1): 2015 by Comparison Method (class-1)	100 kN to 500 kN	0.85%
56	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / CTM / UTM / Uniaxial / Spring / Force Gauge / Flexural Testing Machine (Compression Mode)	Using Force Proving Instruments as per IS 1828 (Part-1): 2015 by Comparison Method (class-1)	50 kN to 100 kN	0.85%



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57	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Compression / Universal Testing Machine / CTM / UTM / Uniaxial / Spring / Force Gauge / Flexural Testing Machine (Compression Mode) (class-2)	Using Force Proving Instruments as per IS 1828 (Part-1): 2015 by Comparison Method	500 kN to 2000 kN	0.85%
58	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Tensile / Universal / Uniaxial / Force Gauge (Tension Mode)	Using Force Proving Instruments as per IS 1828 (Part-1): 2015 by Comparison Method (class -1)	0.5 kN to 5.0 kN	0.81%
59	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale & Balance - Accuracy Class I & coarser (Readability: 0.01 mg & coarser)	Using E2 Class Standard Weight as per OIML R 76	1 mg to 220 g	1mg
60	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class II Readability 1 g & Coarser	Using Standard Weight of F1 & F2 Class	>0.5 kg to 20 kg	2.0g
61	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class I Readability 0.1 mg & Coarser	Using Standard Weight of E2 Class, Procedure based on OIML R76	10 mg to 320 g	1.2mg



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62	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class II Readability 1 mg & Coarser	Using Standard Weight of F2 Class, Procedure based on OIML R76 of 2006	100 mg to 4000 g	0.04g
63	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class III Readability 1 g & Coarser	Using Standard Weight of F1 & F2 Class	>1 kg to 60 kg	2g
64	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class III Readability 10 g & Coarser	Using Standard Weight of F1 & F2 Class	>0.5 kg to 20 kg	1.2g
65	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class III Readability 10 g & Coarser	Using Standard Weight of F1 & F2 Class	>1 kg to 60 kg	15g
66	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class III Readability 10 mg & Coarser	Using Standard Weight of F2 Class, Procedure based on OIML R76 of 2006	>100 mg to 4000 g	0.40g
67	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class III Readability 100 g & Coarser	Using Standard Weight of F1 & F2 Class	>1 kg to 60 kg	150g
68	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale and Balance - Accuracy Class III Readability 100 mg & Coarser	Using Standard Weight of F1 & F2 Class	>0.5 kg to 20 kg	1g



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69	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Dry Block Calibrator / Oven / Incubator / Freezer / Oil Bath / Autoclave / Melting Point Apparatus / Cold-Hot Chamber	Using High Precision Digital Thermometer with PT-100 Sensor by Comparison Method	(-) 78 °C to 100 °C	0.61°C
70	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Dry Block Calibrator / Oven / Incubator / Oil Bath / Autoclave / Melting Point Apparatus / Hot Chamber	Using Standard PT-100 Sensor, S-Type Thermocouple, Precision Thermometer & 6½ DMM by Comparison Method	300 °C to 600 °C	2.1°C
71	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Dry Block Calibrator / Oven / Incubator / Oil Bath / Autoclave / Melting Point Apparatus / Hot Chamber	Using Standard R-Type , High Precision Thermometer & 6½ DMM by Comparison Method	600 °C to 1200 °C	2.51°C



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72	THERMAL-TEMPERATURE	Temperature Indicator with sensor of Dry Block Calibrator / Oven / Incubator(only for non medical devices) / Oil Bath / Autoclave / Melting Point Apparatus / Hot Chamber	Using High Precision Digital Thermometer by Comparison Method	100 °C to 300 °C	0.7°C
73	THERMAL-TEMPERATURE	Temperature Oven / Cold & Heat Chamber / Incubator(only for non medical devices) / Freeze / Furnace	Using Standard PT-100 Sensor with Data Logger 12 Channel by Spatial Mapping Method at Multi Locations	0 to 250 °C	1.02°C

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