Laboratory	**Perfect Enterprises, S.No. 81/5, Kiran Industrial Estate, J Block, Shed No. 1, Shivane, Pune, Maharashtra**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Electro-Technical Calibration**	**Issue Date**	**24.06.2015**
Certificate Number	**C-0827**	**Valid Until**	**23.06.2017**
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
I. SOURCE			
1. AC Voltage $	**50 Hz**		
	10 mV to 300 mV	4.10 % to 1.15 %	Using Multifunction Calibrator Zeal Make & $5^{3/4}$ DMM Rish 20 Make by Comparison
	300 mV to 30 V	1.15 % to 1.50 %	
	30 V to 1000 V	1.50 %	
2. DC Voltage $	1 mV to 300 mV	1.20 % to 0.21 %	Using Multifunction Calibrator Zeal Make & $5^{3/4}$ DMM Rish 20 Make by Comparison
	300 mV to 30 V	0.21 % to 0.50 %	
	30 V to 1000 V	0.50 % to 0.23 %	
3. Frequency $	45Hz to 1000 Hz	0.60 % to 0.26 %	Using Multifunction Calibrator Zeal Make & $5^{3/4}$ DMM Rish 20 Make by Comparison
4. AC Current $	**50 Hz**		
	10 mA to 3A	1.76 % to 1.79 %	Using Multifunction Calibrator Zeal Make & $5^{3/4}$ DMM Rish 20 Make With current coil Zeal Make by Comparison
	3 A to 10 A	1.79 % to 1.05 %	
	10 A to 1000 A	1.05 % to 1.20 %	
5. DC Current $	1 mA to 3A	0.60 % to 3.00 %	Using Multifunction Calibrator Zeal Make & $5^{3/4}$ DMM Rish 20 Make With current coil Zeal Make by Comparison
	3 A to 10 A	3.00 % to 1.20 %	
	10 A to 1000 A	1.20 % to 1.10 %	
6. DC Resistance $	1 Ω to 1000 Ω	5.90 % to 0.50 %	Using Decade Resistance Box Zeal Make by Direct
	1000 Ω to 1 MΩ	0.50 % to 0.15 %	
	1 MΩ to 100 MΩ	0.15 % to 1.53 %	
	100 MΩ to 1 GΩ	1.53 % to 2.00 %	

Ram Ashray
Convenor

Avijit Das
Program Manager

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
7. Capacitance $	**1 kHz**		
	10 nF to 10 µF	3.00 % to 3.30 %	Using Decade Capacitance Box Multiscope Make by Direct
8. TEMPERTURE SIMULATION $			
T/C Mode			
J - Type	30 °C to 1000 °C	2.43 °C	Using Universal Calibrator Sansui Make by Direct
K- Type	30 °C to 1000 °C	2.43 °C	
R- Type	150 °C to 950 °C	2.52 °C	
S- Type	150 °C to 950 °C	2.52 °C	
RTD	0 °C to 400 °C	1.50 °C	Using Universal Calibrator Sansui Make by Direct
II. MEASURE			
1. AC Voltage $	**50 Hz**		
	10 mV to 300 mV	4.10 % to 1.30 %	Using $5^{3/4}$ DMM Rish 20 Make by Direct
	300 mV to 30 V	1.30 % to 1.50 %	
	30 V to 1000 V	1.50 % to 1.40 %	
2. DC Voltage $	10 mV to 300 mV	5.59 % to 0.21 %	Using $5^{3/4}$ DMM Rish 20 Make by Direct
	300 mV to 30 V	0.21 % to 0.06 %	
	30 V to 1000 V	0.06 %	
3. AC Current $	**50 Hz**		
	1 mA to 3 A	2.03 % to 2.00 %	Using $5^{3/4}$ DMM Rish 20 Make by Direct
	3 A to 10 A	2.00 % to 1.03 %	
4. DC Current $	1 mA to 3A	0.18 % to 1.65 %	Using $5^{3/4}$ DMM Rish 20 Make by Direct
	3 A to 10 A	1.65 % to 0.77 %	
5. Frequency $	45 Hz to 1000 Hz	0.24 % to 0.20 %	Using $5^{3/4}$ DMM Rish 20 Make by Direct

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
6. DC Resistance [$]	10 Ω to 1000 Ω 1000 Ω to 1 MΩ 1 MΩ to 30 MΩ	2.00 % to 0.40 % 0.40 % to 0.10 % 0.10 %	Using $5^{3/4}$ DMM Rish 20 Make by Direct

*** Measurement Capability is expressed as an uncertainty (±) at a confidence probability of 95%**
[$]Only in Permanent Laboratory

Ram Ashray
Convenor

Avijit Das
Program Manager