

USPCASE Lab Tests Charges for NUST Researchers

S No		Test Description	Rate (PKR)
1.	AEMS	X-ray Diffraction (XRD)	400
2.		Scanning electron microscopy (SEM)	1,200
3.		Simultaneous Thermogravimetry and Differential Thermal Analyses (TG-DTA)	1,500
4.		FTIR Spectrometer	300
5.		BET LP Sorption Analyzer	2,500
6.		Thermal Dilatometer	2,000
7.		Laser Particle Size Analyzer	500
8.		UV-Vis-NIR Spectrophotometer	300
9.		Atomic Force Microscopy (AFM)	1,800
10.		LCR meter	300
11.		Hall Effect Measurement System	300
12.		Microhardness Tester	600
13.		Electrochemical Work Station (per slot)	500
14.		Electronic Load Analyzer	300
15.		Thin film spectrometer	400
16.		Optical microscopy	300
17.		Raman Spectrometer	300
18.		*Magnetron Sputtering	3,000
19.		*E-Beam Evaporation	3,000
20.		*Thermal Evaporation	1,500
21.		*Advanced Thermal Evaporation	3,000
22.		*Carbon Coating	1,000
23.		*Chemical Vapor Deposition	3,000
24.		Spin Coating	300
25.		Dip Coating	500
26.		*Electro Spinner	500
27.		Electrophoretic	1,000
28.		Ultrasonic Spray	1,500
29.		*Ball Milling / Roll Milling (per slot)	700
30.		*Grinding and Polishing	500
31.		Hydraulic Press	750

32.		Plasma cleaning	400
33.		Salt Spray (per day)	3,000
34.		Spray Dryer	2,500
35.		**Tube Furnace	800
36.		Muffle Furnace	300
37.		Sand Blasting	300
38.		**Atmospheric Plasma Spray	3,500
39.		**High Velocity oxy Fuel Spray	3,500
40.		**Powder Combustion Spray	2,000
41.		**Wire arc spray	1,500
42.		Total Organic/Inorganic Carbon analyzer (TOC)	3,300
43.		HPLC	1,500
44.		UV-Visible Spectrophotometer	300
45.		Polymerase Chain Reaction (PCR)	1,500
46.	Biofuel Lab	Flash Point Tester	300
47.		Gas Chromatography	1,000
48.		Rotary Evaporator	500
49.		Soxhlet Extractor	500
50.		Maximum Power determination	1,500
51.		Performance at STC (IV Curve Test)	1,500
52.		Performance at Low Irradiance	2,000
53.		Leakage Current (Dry/Wet)Test	1,000
54.	Energy Conversion Lab	Static Mechanical Load Test	1,500
55.		Hail Impact Test	1,000
56.		Stabalization	1,000
57.		Electroluminesence Imaging Test	800
58.	Energy Storage & Conservation Lab	Muffle Furnace	300
59.		Electrochemical Work Station	500
60.		Tube Furnace	800
61.		Battery Testing	300
62.		Four Probe Conductivity meter	200
63.		Coin cell fabrication	1,500
64.		High Pressure Sorption Analyzer	3,000
65.	Fossil Fuel Lab	TGA	1,500

66.		CHN-S Elemental Analyzer	2,000
67.		Ash Fusion	2,000
68.		Reactor / Pyrolyzer	6,000
69.	Smart Grid	Protection Relay Development System	1,000
70.		Power Measurement System	1,000
71.		NI Phasor Measurement Unit Development System	500
72.		FPGA Based Rapid Control Prototyping	600
73.		Transient & Frequency Measurement Setup	1,000
74.		Power Quality Analyzer	1,500
75.		Programmable Electronic Load, High Voltage	500
76.		Smart Grid Automation along with SCADA & DCS	500
77.		Environmental Chamber	1,500
78.		Battery Simulator	500
79.		High Voltage Probs	500
80.		Differential Probs	500
81.		High Voltage Power Supply	400
82.		D-Space	1,000
83.		Power Amplifier	1,500
84.	HV Lab	High Voltage Construction KIT AC Voltage Generation upto 200KV DC Voltage Generation upto 280KV AC/DC Voltage withstand test AC/DC Voltage flashover test Specimens: Transformers, Dry/Wet Insulators, Cables, Solid, Liquid and Gases insulation materials, etc	600 (per each test)
85.		PD Measurement test upto 100KV AC Specimens: Transformers, Insulators, Cables, Solid, Liquid and Gases insulation materials, etc.	700
86.		Lightning Impulse Voltage Generator Voltage withstand test upto 400KV Specimens: Transformers, Dry/Wet Insulators, Cables, Solid, and Liquid insulation materials, etc.	600 (per each test)
87.		Breakdown Voltage Test (Up to 75 kVac) on Solid Insulator Circular Disc	400
88.		AC breakdown voltage test (Up to 60 kV) on Liquid insulation material	600

89.		Solid Dielectric Analyzer Dielectric properties (Permittivity, Tan(δ), Capacitance, DC resistivity) of solid insulating material from room temperature to 170°C	400
90.		AC (5KV)/DC (6KV) leakage current measurement test on insulators, cables etc.	300
91.		Ultraviolet (UV-Light) Aging Chamber for 16 hours	400
92.	Solar Energy	Three-Phase Power Quality and Energy Analyzer	400
93.		EQE Measurement System	700
94.		Photoluminescence Spectroscopy	1,000
95.		Indoor IV Tester for PV cell	700
96.		Contact Angle Measurement System	400
97.	Thermal Lab	Bomb Calorimeter	1,500/-
98.		Gas Chromatography Mass Spectrophotometer	3,000/-
99.		Thermal Conductivity Meter	2,000/-
100.		Differential Scanning Calorimetry	3,000/-
101.		Viscometer	400/-
102.		High Speed Camera	1,000/- per hour
103.		Particle Image Velocimetry	2,000/- per hour
104.		Flue Gas Analyzer	1,000/- per run

*An additional amount will be charged in case the applicant does not provide source material/targets or relevant material.

**An additional amount of 5000/- to 15000/- will be charged in case the applicant does not provide Powder, Gas, Wire or relevant material.

Note:

SRFs must be accompanied by proof of payment, such as; Payment can be made via Online/Internet Banking

Title of Account: **NUST CES**

Account Number: **22927000563601**

Bank Name: Habib Bank Limited (**HBL**) Pakistan Branch Code: **2292**

NUST Branch **H-12**, Islamabad NUST FTN/NTN **90137043**

Payment can also be made via Bank Draft / Pay order on behalf of beneficiary "CES RECURRING FUND"

NUST FTN/NTN **90137043**.

The quoted price for all portable items/equipment is for use within USPCAS-E, NUST premises only. For Contact:

AEMS Lab - 05190855279 & 05190855361

Thermal Spray Facility 05190855278 Thermal Energy Lab 05190855291 Smart Grid Lab 05190855292 Fossil Fuel Lab 05190855254 Bio

Fuel Lab 0519085359

Energy Conversion Lab 051-90855362 High Voltage Lab 05190855341 Energy Storage Lab 05190855290 Solar Lab 0519085284