

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

F.No.IIU/ORIC/SC/2024-1501

July 25, 2024

NOTIFICATION

The Vice President (Research and Enterprise) in consultation of the worthy President IIUI and after presenting before ORIC Steering Committee, has been pleased to approve the revised rates for the commercial testing at following IIUI laboratories w.e.f June 14, 2024:

- i. Laboratories of Centre for Advanced Electronics & Photovoltaic Engineering (CAEPE)
- ii. Laboratories of Faculty of Engineering & Technology (FET)

S.No.	Name of Equipment	Status (Operational)	Particulars of Tests	Revised Rates per Test (Rs.)	Approximate time required
Centre For Advanced Electronics & Photovoltaic Engineering (CAEPE)					
Measurement Analysis (Electrical/Electronics/Charge Based)					
1	NANO-CHIP Reliability Grade Hall Effect System	Operational	Hall effect measurement/Quick scan (At room temperature) (Mobility, Conductivity, Dopant type, Carrier concentration, Etc)	1600/- Per Sample	One Week
2	NANO-CHIP Reliability Grade Hall Effect System	Operational	Hall effect measurement/Quick scan (At low temperature 77K) (Mobility, Conductivity, Dopant type, Carrier concentration, Etc)	2000/- Per Sample	1.5 Weeks
3	Multi Head Probe Station/4 point probing	Operational	Wafer or Circuit level Electrical Characterization (I-V, C-V, G-V, P-V measurements)	2800/- Per Sample	Two Weeks
4	ASMEC Electro-Physical Characterization System	Operational	Power/Energy Analysis	1500/- Per Sample	Two Weeks
5	ASMEC Electro-Physical Characterization System	Operational	Charge Analysis	1500/- Per Sample	Two Weeks
6	ASMEC Electro-Physical Characterization System	Operational	2 point probing (Arrhenius Analysis/Activation Energy) (Under vacuum) (77K-500K)	3000/- Per Hour	Two Weeks
7	ASMEC Electro-Physical Characterization System	Operational	2 point Probing (I-V Characterization) (Under vacuum) (Insitu thermal analysis 77k to 500k)	2500/- Per Hour	Two Weeks
8	ASMEC Electro-Physical Characterization System	Operational	2 point Probing (G-V characterization) (Under Vacuum) (Insitu thermal analysis 77k to 500k)	2500/- Per Hour	Two Weeks
9	ASMEC Electro-Physical Characterization System	Operational	C-V Characterization (Pulse and line scanned) (Under Vacuum) (Insitu thermal analysis 77k to 500k)	3000/- Per Hour	Two Weeks

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

10	ASMEC Electro-Physical Characterization System	Operational	Charge-Deep Level Transient Spectroscopy (Q-DLTS) (Under Vacuum) (Insitu thermal analysis 77k to 500k)	3500/- Per Hour	Two Weeks
11	ASMEC Electro-Physical Characterization System	Operational	Photo-stimulated Internal Field Transient Spectroscopy (PIFTS) (Under Vacuum) (Insitu thermal analysis 77k to 500k)	3000/- Per Hour	Two Weeks
12	ASMEC Electro-Physical Characterization System	Operational	I-V Characterization (Room temperature scan)	1500/- Per Sample	One Week
13	ASMEC Electro-Physical Characterization System	Operational	G-V characterization (Room temperature scan)	1500/- Per Sample	One Week
14	ASMEC Electro-Physical Characterization System	Operational	C-V Characterization (Room temperature scan)	1500/- Per Sample	One Week
15	ASMEC Electro-Physical Characterization System	Operational	Charge-Deep Level Transient Spectroscopy (Q-DLTS) (Room temperature scan)	2000/- Per Sample	1.5 Week
16	ASMEC Electro-Physical Characterization System	Operational	Photo-stimulated Internal Field Transient Spectroscopy (PIFTS) (Room temperature scan)	1800/- Per Sample	1.5 Week
17	Hot Chuck	Operational	I-V Characterization (Non-Vacuum) (300k to 900k)	1500/- Per Hour	Two Weeks
18	Hot Chuck	Operational	G-V characterization (Non-Vacuum) (300k to 900k)	1500/- Per Hour	Two Weeks
19	Hot Chuck	Operational	C-V Characterization (Non-Vacuum) (300k to 900k)	1500/- Per Hour	Two Weeks
20	ASMEC Electro-Physical Characterization System	Operational	I(t) Transient behavior of Device w.r.t electric Current	1500/- Per Sample	Two Weeks
23	Femto-meter	Operational	Extremely low current analysis for variable application	1500/- Per Sample	Two Weeks
Process Fabrication & Deposition					
14	Atomic Layer Nano-Master Deposition System	Operational	Metal Deposition using boat and crucible (Physical Vapour Deposition)	10,500/- Per Run	Two Weeks
15	MEMS Grade Spin Coating, Baking and Stirring	Operational	Spin Deposition Coating	1200/- Per Run for Half an Hour	One Week
16	Electro-Chemical Impedance Spectroscopy	Operational	Impedance spectroscopy (Potentiostat/Galvnostat)	1500/- Per Sample	1.5 Week
17	Fume Hood Wet Bench	Operational	Sample Cleaning	900/- Per Run for Half an hour	One Week
18	Hot Plate	Operational	Sample Baking/contact Sintering	800/- Per Run for Half an hour	One Week
19	Fume Hood Wet Bench	Operational	Sample Chemical Etching	1800/- Per Run for Half an hour	One Week
20	Rapid thermal Furnace	Operational	RTA/Furnace Annealing	2000/- Per Run	One Week
21	Rapid thermal Furnace	Operational	Rapid thermal Oxidation	2500/- Per Run	Two Weeks
22	Rapid thermal Furnace	Operational	Rapid thermal Nitridation	3500/- Per Run	Two Weeks

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

23	Magnetron Plasma Sputtering Coater	Operational	Deposition Sputtering (Magnetron) Dual Mode both DC and RF	8500/- Per Run	Two Weeks
24	Mask Aligner	Operational	Photo-lithography (Depends upon the nature of application availability of the mask and over all experimentation)	6000/- Per Sample	As per the nature of the Experiment
25	Electro Spinning & Electro Spraying	Operational	Electro Spinning & Electro Spraying of nano layers, fibers and materials for versatile applications	3500/- Per Sample	Two Weeks
26	Plasma Enhanced Chemical Vapor Deposition (PECVD) System	Operational	Deposition (PECVD)	7500/- Per Run	As per the nature of the Experiment
Magnetic					
27	Vibrating Sample Magnetometer	Under Commissioning	Magnetic Measurements	6000/-	2.5 Weeks
Structural Morphology & Imaging					
28	Atomic Force Microscopy	Operational	Atomic Scale Microscopy measurements AFM and STM Mode	4800/- Per Sample	Three Weeks
29	Scanning Electron Microscopy	Operational	Scanning Electron Microscopy (BSE, EDX and Imaging down to Sub-micron level)	6000/- Per Sample	two Weeks
30	X-Ray Diffraction System	Under Commissioning	Diffraction scan (Indices, planes, Material composition analysis)	4000/- Per Sample	Three Weeks
31	High Resolution Thickness Profiling	Operational	Thickness Profiling of the surface down to nm through stylus scanning	2500/- Per Sample	Two Weeks
Optical					
32	Spectroscopic Ellipsometer	Operational	Spectroscopic Ellipsometry (Full Scan SE) (Refractive index, Extinction coefficient, dielectric Coefficient, Thickness of the layer)	3500/- Per Sample	Two Weeks
33	Photoluminescence System (PLS)	Operational	Photoluminescence System (PLS) (Optical bandgap, defects mapping) Low temperature analysis	3000/- Per Sample	One Week
Solar Cell/PV Evaluation					
34	Sun Simulator Class AAA	Operational	Sun Simulator test, Efficiency of the cells along with the packing fraction, electrical analysis, etc.	1500/- Per Sample	One Week
Faculty of Engineering & Technology (FET) Department of Civil Engineering (DCE)					
Concrete Lab					
	Compression testing Machine	Operational	Compressive Strength test on Concrete / mortar cubes	900	05 working Days
			a) Compression test on cylinders without capping (already capped by client) b)	a)-900, b)1250	05 working Days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

			Compression test on cylinders with capping of nupron pad		
			Compression test on hollow & solid blocks	1200	05 working Days
			Compressive Strength of Tuff pavers/Tiles	1200	05 working Days
			Compression test on bricks (with capping)	1000	05 working Days
	Slump cone, Compression machine and sieves etc	Operational	Mix Design	40000	14 working days
			Mix design(detailed)	75000	15 working days
	Oven, weighing balance and water container	Operational	Water absorption of brick	1000	05 working Days
			Efflorescence test of brick	1200	05 working Days
4	Rebound Hammer and Ultra sonic pulse velocity apparatus	Operational	Non-destructive testing using rebound hammer, ultrasonic tester	Depends on the site and extent of work	Depends on the site and extent of work
5	Compression testing Machine	Operational	Core Test (Provided by the client)	5000	05 working Days
6	Core Cutter	Not available	Core Test extraction at site	10000 (Depend on site conditions as well)	Depend on site conditions
7	Vicat Apparatus	Operational	Initial Setting time	1200	05 working Days
			Final Setting time	1200	05 working Days
8	Lechatelier Apparatus	Operational	Soundness of cement	1200	05 working Days
9	Flask, Bottle and Kerosene	Operational	Density /Specific gravity of cement	1500	05 working Days
10	Sieves, weighing balance and bowl etc	Operational	Fineness of cement by sieve	2000	05 working Days
11	Blaine Air permeability Apparatus	Operational	Fineness of cement by Blaine air permeability Apparatus	3000	05 working Days
12	Compression testing Machine and Mortar Cubes	Operational	Compressive strength of cement using mortar cubes	1500	05 working Days
13	Sieves, sieve shaker and Weighing Balance etc	Operational	Sieve analysis of sand	1200	05 working Days
14	Sieves, sieve shaker and Weighing Balance etc	Operational	Fineness Modulus of sand	1200	05 working Days
15	Weighing balance, volumetric flask, conical mould and tamping rod	Operational	Water absorption of sand	1800	05 working Days
16	Weighing balance, volumetric flask, conical mould and tamping rod	Operational	Specific gravity of fine aggregate	1800	05 working Days
17	Sodium and magnesium sulphate as consumable, Weighing balance, Container for immersion and wire basket etc	Operational	Soundness of fine aggregates by B.S. using Sodium sulphate or Magnesium Sulphate	11000	05 working Days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

18	Sand Equivalent Test Apparatus	Operational	Sand Equivalent Test	2100	05 working Days
19	Balance, Tamping Rod, Straight edge, scoop, dry oven and cylindrical metal container	Operational	Density /Unit weight (Rodded or Loose) of fine Aggregate	2000	05 working Days
20	Hydrometer	Operational	Material Finer than 0.075mm	1000	05 working Days
21	Clay Lumps & Friable Particle Apparatus	Not available	Clay Lumps and Friable Particles in Sand	2500	05 working Days
22	Glass jar and suitable Solution	Not available	Organic Impurities in sand	2500	05 working Days
23	Seives , seive shaker and Weghing Balance etc	Operational	Sieve analysis of coarse aggregate	1200	05 working Days
24	Seives , seive shaker and Weghing Balance etc	Operational	Specific gravity of aggregate	1800	05 working Days
25	Buoyancy balance, Bowl, oven and Distilled water	Operational	Water obsorption of aggregates	1800	05 working Days
26	Los angeles test apparatus	Operational	Crushing Value of Coarse Aggregate	2500	05 working Days
27	Impact value test Apparatus	Operational	Impact Value of coarse Aggregate	2500	05 working Days
28	Balance, Tamping Rod, Straight edge, scoop, dry oven and cylindrical metal container	Operational	Density/Unit weight (Rodded or loose) of coarse Aggregate	2000	05 working Days
29	Sodium and magnesium sulphate as consumable, Weghing balance, Container for immersion and wire basket etc	Operational	Soundness (aggregates) by B.S. using Sodium sulphate or Magnesium Sulphate	11000	05 working Days
30	Los angeles test apparatus	Operational	Los Angles Abrsion Value of coarse Aggregate	2500	05 working Days
31	Clay Lumps & Friable Particle Apparatus	Not available	Clay Lumps and Friable Particles in coarse aggregate	2500	05 working Days
32	Hydrometer	Operational	Material Finer than 0.075mm	1000	05 working Days
33	Glass jar and suitable Solution	Not available	Organic Impurities in coarse aggregate	2500	05 working Days
34	Concrete Permeability Apparatus	Operational	concrete permeability test	15000 per specimen	05 working Days
35	Wighing Balance and Oven	Operational	Density of concrete block etc	2000	04 working Days
36	Verification of Report			500	02 Working days
37	Duplicate Result			500	Same day
Geotech / Soil Lab					
1	Electric Drying Oven	Operational	Moisture Content (Lab)	500	05 working Days
2	Unit Weight Test Apparatus	Operational	Unit Weight (Lab)	550	05 working Days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

3	Sieve Sets	Operational	Sieve Analysis (Dry)	2400	05 working Days
4	Sieve Sets	Operational	Sieve Analysis (Wash)	2400	05 working Days
5	Hydrometers with Water Baths	Operational	Hydrometer	4500	05 working Days
6	Liquid Limit Test Apparatus and Plastic Limit Test Apparatus	Operational	Liquid Limit and Plastic Limit	2000	05 working Days
7	Shrinkage Limit Test Apparatus	Operational	Shrinkage Limit	900	05 working Days
8	Constant Head Permeameter	Operational	Permeability (Constant Head)	2900	05 working Days
9	Variable Head Permeameter	Operational	Permeability (Variable Head)	3000	05 working Days
10	Direct Shear Machine	Operational	Direct Shear	4500	07 working Days
11	Oedometer	Operational	Consolidation	7000	05 working Days
12	Specific Gravity Test Apparatus	Operational	Specific Gravity (Fine Grain)	1400	05 working Days
13	Specific Gravity Test Apparatus	Operational	Specific Gravity (Coarse Grain)	1400	05 working Days
14	Standard Proctor Test Apparatus	Operational	Standard Compaction (4 inch Mould)	2800	05 working Days
15	Standard Proctor Test Apparatus	Operational	Standard Compaction (6 inch Mould)	3900	05 working Days
16	Modified Proctor Test Apparatus	Operational	Modified Compaction (4 inch Mould)	4300	05 working Days
17	Modified Proctor Test Apparatus	Operational	Modified Compaction (6 inch Mould)	4500	05 working Days
18	CBR Test Machine	Operational	One Point CBR (soaked) /T-99	5400	07 working Days
19	CBR Test Machine	Operational	One Point CBR (Unsoaked)	3400	07 working Days
20	CBR Test Machine	Operational	Three Point CBR (soaked) T-193/T-99/T-180-D	8400	07 working Days
21	CBR Test Machine	Operational	Three Point CBR (unsoaked)	6800	07 working Days
22	CBR Test Machine	Operational	One Point CBR (soaked) T-180	6400	07 working Days
23	Sand Replacement Test Apparatus	Operational	Field Density Test excluding Transportation	5900	07 working Days
24	Sieve Sets	Operational	Coefficient of Uniformity D10, D30, D60	2900	05 working Days
25	Dynamic Cone Penetrometer	Operational	Dynamic Cone penetrometer Test	17500	05 working Days
26	Triaxial Test Apparatus	Operational	Triaxial Test	9500	07 working Days
27	Unconfined Compression Machine	Operational	Unconfined Test	3000	10 working Days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

28	Relative Density Test Apparatus	Operational	Relative Density of Sand	2900	05 working Days
29	Plate Load Test Apparatus	Operational	Plate Load Test	75000 + Extra Charges of Transportation and Loading Requirements as per Site	14 Working Days
30	Sieve Sets	Operational	Unified Classification AASHTO	2900	05 working Days
31	Small Field Test Apparatus	Operational	Visit of expert at site	5800	05 working Days
32	Unit Weight and FDT Test Apparatus	Operational	Density of Sand for Sand Cone Apparatus	1450	05 working Days
33	Casagrande’s Liquid Limit Test Apparatus	Operational	Bentonite (Clay) Liquid Limit	1950	05 working Days
Materials Lab					
1	Universal Testing Machine (U.T.M)	Operational	Deformed Steel Tensile Test (Up to 1inch)	1200/pc	05 working days
			Bend Test (Up to 1 inch)	600/pc	05 working days
			Deformed Steel Tensile Test (Over to 1inch)	2000/pc	05 working days
			Bend Test (Over 1 inch)	1100/pc	05 working days
2	Blance, scale and Vernier	Operational	Weight and Gauge	350/pc	05 working days
3	Duplicate of Repot (Copy)			500/result	Same day
4	Verification of Report			500/result	02 working Days
Transportation Soil Lab					
S.No.	Name of Equipment	Status (Operational)	Particulars of Tests	Revised Rates per Test (Rs.)	Approximate time required
1	Bitumen Extraction Machine	Operational	This apparatus is used to determine the bitumen %age in bitumen mix. Paving Mixture is tested to determine conformity with bitumen content requirement.	10000	05 working Days
2	Marshal Stability and flow apparatus	Operational	(A) Cakes provided by the client (B) Cakes not provided by client	4000 8000	05 working Days
3	Ductility Machine	Operational	Ductility Test: This test is used to determine the bitumen %age in bitumen mix. Paving Mixture is tested to determine conformity with bitumen content requirement	3000	05 working Days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

4	Penetrometer	Operational	This apparatus is used to identify an asphalt material and ensure that proper grade of binder is used for specific job.	2500	05 working Days
5	Flash & Fire Point Test Apparatus	Operational	This apparatus is used is designed to determine the temp to which an asphaltic material can be heated safely without the hazard of its catching fire.	2000	05 working Days
6	Softening Point Test Apparatus	Operational	This apparatus is used to identify an asphalt material and ensure that proper grade of binder is used for specific job.	1500	05 working Days
7	Asphalt Mix Design	Operational		60000	05 working Days
8	Los angeles abrasion test	Operational		2500	05 working Days
9	Loss on Heating (RTFO)	Operational		5000	05 working Days
10	Flakiness Apparatus	Operational	Flakiness Index	2200	04 working Days
11	Elongation Apparatus	Operational	Elongation Index	2200	04 working Days
12	Specific gravity of Aggregates	Operational		1500	05 working Days
13	Ten Percent Fines value test on coarse aggregates	Non-Operational		2000	05 working Days
14	Density of Aggregates	Operational		2000	05 working Days
15	Specific gravity of Bitumen	Operational		1500	05 working Days
16	Water absorption (aggregates)	Operational		1000	05 working Days
17	Skid Resistance Apparatus	Operational	Skid Resistance	2000	05 working Days
18	Impact value test Apparatus	Operational	Impact Value of coarse Aggregate	2500	05 working Days
19	Stripping and coating	Operational		2000	05 working Days
20	solubility	Non-Operational		2000	05 working Days
21	Core cutter	Non-Operational	Collection of Core samples (first 4 core)	7000 per sample + Transportation	05 working Days
			Collection of Core samples (each core after 4 cores)	2000 per sample + Transportation	05 working Days
22	GMM Test	Operational		3000	05 working Days
23	Gmb Test	Operational	Specific gravity of cores	1000	05 working Days
24	Crushing Values	Not operational		2000	05 working Days
25	DSR	Operational	Frequency Sweep Test	10000	05 working Days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

26		Operational	Temperature Sweep Test	10000	05 working Days
27		Operational	Multiple stress Creep Recovery Test	10000	05 working Days
28		Operational	Performance Grade Testing	5000	05 working Days
29	N/A	N/A	Verification of Report	500	N/A
30	N/A	N/A	Duplicate Result	500	N/A
Hydraulics Lab & Environmental Lab					
1	Earth Electrical Resistivity meter	Not operational	Electrical resistivity sounding	25000	05 working days
2	Water Quality Testing Services Chemical	Not Operational	E.C	150/sample	05 working days
			Bicarbonate	150/sample	05 working days
			pH	150/sample	05 working days
			Alkalinity	150/sample	05 working days
			Turbidity	150/sample	05 working days
			Hardness	200/sample	05 working days
			Magnesium	200/sample	05 working days
			Nitrate	200/sample	05 working days
			Potassium	200/sample	05 working days
			Sodium	200/sample	05 working days
			Sulphate	200/sample	05 working days
			TDS	200/sample	05 working days
3	Water Quality Testing Services Micro Biological	Not Operational	Presence/Absence Test for Micro Biology	400/sample	05 working days
			Trotal Coliforms	2000/sample	05 working days
			Fecal Coliforms		05 working days
			E.Coli		05 working days

International Islamic University, Islamabad
Office of Research, Innovation and Commercialization (ORIC)

2. The above mentioned rates are hereby notified for the information of all concerned that would be implemented for commercial testing at IIUI.

Dr. Zaheer Ahmed
Deputy Director (ORIC)

Distribution:

- i. Vice President (Research and Enterprise)
- ii. Dean, Faculty of Engineering & Technology (FET)
- iii. Director (ORIC)
- iv. Dr. Adnan Aslam Noon (DME, FET)
- v. Dr. Shahid Ikram (DEE, FET)
- vi. Dr. Rashid Farooq (DCE, FET)
- vii. Dr. Nisar Ali Khan (Soil & Foundation Lab, FET)
- viii. Engr. Mamoon Riaz (Concrete Lab, FET)
- ix. Dr. Shoaib Alam (CAEPE)

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