

**BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA – 1000**

**DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING**

*SERVING THE COUNTRY WITH INNOVATION AND QUALITY IN TESTING & CONSULTANCY*



**PARTIAL LIST OF APPROVED RATES FOR TESTING SERVICES**

**Rates include VAT(15%), University Overhead (30%) & Laboratory Development and Maintenance**

Department of EEE reserves the right to change the rates at any time without any prior notice

**BRTC-EEE**

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**BRTC Office Time : Sat to Wed 9:00 AM to 5:00 PM, Thursday 9:00 AM to 2:00 PM**

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**PARTIAL LIST OF APPROVED RATES FOR TESTING SERVICES**

Name of Test and Test rate			
Transformer Test			
Test Items	Rating	Combined Test Fee (Tk)	Itemwise Test Fee (Tk)
1. Measurement of Turns Ratio	3 phase, Upto 100 kVA, 11/0.415 kV	50000~80000	
2. Vector Group Test			
3. Measurement of Winding Resistance at 75°C			
4. Measurement of Insulation Resistance			
5. Measurement of No-load Loss and No-Load Current			
6. Measurement of Impedance Voltage and Load Loss at 75°C	3 phase, 100 < kVA ≤ 250, 11/0.415 kV	100000 ~ 150000	
7. Power Frequency High Voltage Test			
8. Test of Transformer Oil	3 phase, 250 < kVA ≤ 500, 11/0.415 kV	175000 ~ 225000	
9. Temperature Rise Test			
	3 phase, 500 < kVA ≤ 1000 11/0.415 kV	250000 ~ 300000	
	3 phase, 1 < MVA ≤ 5 11/0.415 kV	325000 ~ 350000	
	3 phase, 10-13 MVA 11/0.415 kV or 33/0.415 kV at supplier lab	400000-	

	3 phase, 10-26 MVA 11/0.415 kV or 33/0.415 kV at supplier lab	4500000-
	single phase, 10-20 kVA 11/0.415 kV	50000-80000
<b>Cable Test</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimensional Test 2. DC Resistance Test 3. Insulation Resistance Test 4. Current carrying capacity Test 5. AC high voltage withstand test	1.0 rm-10 rm BYA/NYY XLPE	1x 20000
		2x 30000
		3x40000
		4x50000
	10 rm-20 rm BYA/NYY XLPE	1x → 30000
		2x →40000 3x →50000 4x →60000
	20 rm-50 rm BYA/NYY XLPE	1x → 35000
		2x →45000 3x →55000 4x →65000
50 rm-120 rm BYA/NYY XLPE	1x → 40000	
	2x →50000 3x →60000 4x →65000	
120 rm-240 rm BYA/NYY XLPE	1x → 45000	
	2x →55000 3x →65000 4x →75000	
240 rm-400 rm BYA/NYY XLPE	1x → 50000	
	2x →60000 3x →70000 4x →80000	
400 rm-630 rm BYA/NYY XLPE	1x →60000	
	2x →70000 3x →80000 4x →90000	
<ul style="list-style-type: none"> <li>• For HT cables Tk 10000 should be added</li> <li>• For FRLS test Tk 10000 should be added</li> </ul>		
<b>Circuit Breaker (MCCB/MCB) Test</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>

1. Mechanical operation test 2. Insulation resistance test 3. High voltage test 4. Impulse voltage 5. Tripping test 6. Temperature rise	Depending upon rating	30000-80000
<b>Circuit Breaker (VCB/ACB) Test</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Mechanical operation test 2. Insulation resistance test 3. High voltage test 4. Impulse voltage 5. Tripping test 6. Temperature rise	Depending upon rating	70000-100000
<b>Instrument Transformer (CT/PT) Test</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Mechanical operation test 2. Insulation resistance test 3. High voltage test 4. Ratio Test 6. Temperature rise	Depending upon rating	50000
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<b>Overhead conductor</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimensional Test 2. DC Resistance Test 3. Insulation Resistance Test (if insulated) 4. Current carrying capacity Test 5. AC high voltage withstand test (if insulated)	Depending upon rating	Same as Cables
<b>HT panel</b>		

<ol style="list-style-type: none"> <li>1. Dimensional</li> <li>2. Fitment &amp; Alignment</li> <li>3. Physical Test (Sample)</li> <li>4. Measurement of IR Value a) Before HV Test b) After HV Test</li> <li>5. High Voltage test/Dielectric</li> <li>6. Impulse Test</li> <li>7. Partial Discharge Test</li> <li>8. Heat run / Temperature rise test</li> <li>9. Enclosure Protection Test / Ingress Protection (IP)</li> <li>10. Calibration</li> <li>11. Noise &amp; Vibration</li> <li>12. Operational &amp; functional check</li> <li>13. Clearance and creepage Distance</li> </ol>	Depending upon rating	80000-
<b>LT panel</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
<ol style="list-style-type: none"> <li>1.Mechanism Operation Test</li> <li>2.Rated Current Test</li> <li>3.Temperature Rise Test</li> <li>4.Thermal Overload Test</li> <li>5.Magnetic Trip Test</li> <li>6.Insulation Resistance Measurement Test</li> <li>7.Power Frequency High Voltage Test</li> </ol>	Depending upon rating	80000-
<b>PFI plant</b>		
<ol style="list-style-type: none"> <li>1.Discharge rate of the capacitor bank</li> <li>2.AC voltage test of the capacitor bank between terminals and the casing.</li> <li>3.Insulation test</li> <li>4.Performance test at rated voltage of the capacitor banks</li> <li>5.Operations of the PFI controller, digital display, contactor, fuse and ON/OFF indicators.</li> <li>6.Auto Mode Operation Sequence and Manual Mode Sequences</li> <li>7.MCCB test.</li> </ol>	Depending upon rating	80000-

<b>ATS</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Mechanical Operation Test Satisfactory 2. Functionality Test Satisfactory 3. Rated Current and Temperature Rise Test Satisfactory 4. Insulation Resistance Test Satisfactory 5. Power Frequency High Voltage Test	Depending upon rating	40000-
<b>Drop out fuse</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimension Test 2. Dry Flashover 3. Wet Flashover 4. Continuous Current Test 5. Mechanical Operation Test		40000-
<b>Busbar</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimensional Test 2. DC Resistance Test 3. Insulation Resistance Test (if insulated) 4. Current carrying capacity Test 5. AC high voltage withstand test (if insulated)		30000-
<b>BBT system</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimensional Test 2. DC Resistance Test 3. Insulation Resistance Test (if insulated) 4. Current carrying capacity Test 5. AC high voltage withstand test (if insulated)		30000-
<b>AVR</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>

1. Performance of AVR under no-load condition		40000-
2. Performance of AVR under resistive full load condition		
<b>UPS</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. kVA rating test 2. AC high voltage withstand test 3. Current rating test		20000-
<b>Motor</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Insulation resistance test 2. No load and blocked rotor test 3. Efficiency test 4. Wire damage test 5. Electrical current leakage test		20000-
<b>Motor starter</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Testing of Wye-Delta starter		20000-
<b>Capacitor bank</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Discharge rate of the capacitor bank 2. AC voltage withstand test 3. Insulation test 4. Performance test at rated voltage of the capacitor banks		20000-
<b>High voltage insulator test</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimension Test 2. Dry Flashover 3. Wet Flashover		40000-
<b>Test and calibration of meters</b>		

Test Items	Rating	Test Fee (Tk)
Ammeter		15000
Voltmeter		15000
Energy meter		15000
Power meter		15000
Multimeter		15000
Analog/digital insulation resistance meter		15000
Earh resistance meter		15000
Lux meter		15000
<b>Variac, current injector</b>		
Test Items	Rating	Test Fee (Tk)
1. Voltage, current and kVA rating test 2. AC high voltage withstand test 3. Heat run 4. Efficiency test 5. Load test		40000-
<b>Copper terminals lugs and service ball tests</b>		
Test Items	Rating	Test Fee (Tk)
1. Current rating test		25000-
<b>Earth resistivity test</b>		
Test Items	Rating	Test Fee (Tk)
		15000-
<b>Surge arrestor test</b>		
Test Items	Rating	Test Fee (Tk)
1. Operation test 2. Current rating test		30000-
<b>Transformer sound level (dB) test</b>		
Test Items	Rating	Test Fee (Tk)
		10000
<b>Battery</b>		
Test Items	Rating	Test Fee (Tk)
Industrial 2V Battery Block		65000

Battery (Pb-acid)		40000
Battery (Li-based)		50000
<b>Solar PV Panel</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Rated Power/Maximum Power under STC, Pmax (Watts) 2. Open circuit voltage under STC, Voc (Volts) 3. Short circuit current under STC, Isc (Amps) 4. Maximum working voltage at Pmax under STC, Vmp (Volts) 5. Maximum working current at Pmax under STC, Imp (Amps) 6. Cell efficiency 7. Module efficiency 8. Fill factor, FF	NA	20000-
<b>Street Light System consisting of Light, battery, charge controller</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Testing of light 2. Testing of battery 3. Testing of charge controller	NA	70000-
<b>LED Light</b>		
1. LED Input Power(W) 2. Color Rendering Index (CRI) 3. Lumen 4. Lumen per Watt 5. PF 6. Correlated Color Temperature (CCT)		30000-
<b>Ingress protection test</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
<b>IP 55, IP 65</b>		15000-25000
<b>Charge Controller</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>

1. MPPT mechanism 2. Labeling on charge controller casing 3. Rated Voltage  4. High voltage disconnect 5. Low voltage disconnect 6. Low voltage reconnect 7. Maximum current handling capacity 8. Maximum self current drawn 9. Reverse current leakage protection 10. Short-circuit protection 11. Reverse polarity protection 12. Efficiency of the Charge Controller 13. Charging indicator	NA	30000-
<b>Inverter</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Voltage and current ratings 2. Power ratings 3. Efficiency	<5 kVA	25000
<b>DC - DC Converter with charge controller</b>		
1. Voltage ratio 2. Conversion efficiency 3. Current rating	<5 kVA	30000
<b>Solar Pump Controller</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
Inverter efficiency at different frequency	NA	30000
<b>Switch/Socket</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Mechanical operation test 2. Insulation resistance test 3. High voltage test 4. Temperature rise	NA	8000-20000
<b>Fan</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Speed at rated condition 2. Input power 3. Rated current 4. Power factor at rated Condition	NA	10000-50000

5. Air Delivery 6. Service Value 7. Temperature rise test		
<b>Fan Dimmer</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Insulation resistance test 2. Power frequency High Voltage test 3. Temperature rise test 4. Leakage current test 5. Voltage Drop test 6. Uniformity Test	NA	8000-
<b>Generator</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Rated output 2. Maximum output 3. Power factor 4. Rated voltage 5. Voltage regulation 6. Frequency		30000-
<b>Firefighting generator</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Rated output 2. Maximum output 3. Power factor 4. Rated voltage 5. Voltage regulation 6. Frequency		35000-
<b>Optical Fiber</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Dimensional test 2. Attenuation 3. Dispersion		30000-

<b>Computer Hardware (motherboard, CPU, Speaker, microphone, power supply, webcam)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
As required		20000-
<b>CCTV system</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
As required		20000
<b>PA system</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
As required		20000
<b>Incubator tests</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
As required		20000
<b>Kitchen Appliances (Washing machine, grinder/blender/juicer, dish washer, rice cooker, microwave/electrical oven, kitchen hood etc)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Earthing test 2. Insulation Resistance test 3. THD measurement test 4. Measurement of true power		10000-
<b>Data communication Cables (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
		8000-
<b>Wireless Walkie Talkie/ VHF test (repeater test)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
		8000-

<b>Cable connector (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
		5000-
<b>Monitor/display (CRT, LED, LCD)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Lumen test 2. Resolution test 3. Voltage, current, power, efficiency test		5000-
<b>CFL</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Input Power(W) 2. Color Rendering Index (CRI) 3. Lumen 4. Lumen per Watt 5. PF 6. Correlated Color Temperature (CCT) 7. Efficiency		30000-
<b>Fluorescent lamp (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Input Power(W) 2. Lumen 3. Lumen per Watt 4. Color Rendering Index (CRI) 5. Correlated Color Temperature (CCT) 6. PF 7. Efficiency		
<b>Fluorescent lamp</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Input Power(W) 2. Color Rendering Index (CRI)		30000-

3. Correlated Color Temperature (CCT)		
4. Lumen		
5. Lumen per Watt		
6. PF		
7. Correlated Color Temperature (CCT)		
<b>Personal computer and laptop (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Earthing test 2. Insulation Resistance test 3. THD measurement test 4. Measurement of true power 5. Testing of battery		10000-
<b>Router/switch/modem (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Bandwidth test 2. Electrical properties (insulation resistance, earthing, true power measurement, THD measurement)		30000-
<b>Power conditioning unit (PCU) (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
		30000-
<b>Room Air-conditioning Unit (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Earthing test 2. Insulation Resistance test 3. THD measurement test 4. Measurement of true power 5. Testing of inverter efficiency and power saving		30000-
<b>Washing machine (all electrical tests)</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>

1. Earthing test 2. Insulation Resistance test 3. THD measurement test 4. Measurement of true power 5. Testing of inverter efficiency and power saving		30000-
<b>Lift, Escalator, Moving platform</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
1. Control System test 2. Lift motor test 3. Motor Braking System test 4. Sensor and any other opto-electrical component test		30000-
<b>Biomedical Equipment</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
Test of all Biomedical Equipment related to Medical Imaging		20000-
<b>Electrical Safety Test of any kind of equipment and Machinery</b>		
<b>Test Items</b>	<b>Rating</b>	<b>Test Fee (Tk)</b>
		Based on Job Involvement