

Faculty of Technology
B. Tech. Textile Chemistry
(R 2021) Semester – II

Course Code: BE3272		
Course Title: Basic Electrical, Electronics and Instrumentation Engineering Laboratory		
Sl. No.	Description of Equipment	Required numbers (for batch of 30 students)
1.	Verification of ohms and Kirchhoff's Laws 1. DC Regulated Power supply (0 - 30 V variable) 2. Bread Board 3. Resistors 4. Multimeter 5. Connecting wires	1 1 As per Circuit diagram 1 As Required
2.	Three Phase Power Measurement 1. Three Phase Variable Load, 2. Ammeters 0-10 A, MI, 3. Wattmeters 0-5 A, 300V, 4. Voltmeter 0-300v,MI 5. Connecting wires	1 2 2 1 As Required
3.	Load test on DC Shunt Motor. 1. Ammeter MC (0-20A) 2. Voltmeter MC (0-300)V 3. Rheostat 7.5 Ω , 10 A 4. Tachometer 5. Field Rheostat 175 Ω , 1.5 A 6. Connecting wires 7. DC Shunt Motor	1 1 1 1 1 As Required 1
4.	Load test on Self Excited DC Generator 1. Voltmeter(0- 300V) 2. Ammeter (0-30 A), (0-2A) 3. Voltmeter (0-30V) 4. Rheostat 175 Ω , 250 Ω 5. Tachometer 6. Connecting Wires 7. DC Shunt Motor coupled with DC shunt Generator	1 1 1 1 1 As Required 1
5.	Load test on Single phase Transformer 1. Ammeter (0-30) A, (0-5) A 2. Voltmeter (0-150)V, (0-300)V 3. Wattmeter – 300V, 5A, UPF 4. Autotransformer 5. Single phase Transformer 6. Connecting Wires	1 1 1 1 1 As Required
6.	Load Test on Induction Motor 1. Ammeter MI (0-20A) 2. Voltmeter MI (0-300)V 3. Wattmeter – 300V, 30 A 4. Tachometer – Digital	1 1 1 1

	5. Connecting Wires 6. Single phase Induction motor	As Required 1
7.	Characteristics of PN and Zener Diodes 1. PN Diode (BY127, OA79), Zener diode (6.8V, 1A) 2. Resistor 1 K Ω , 100 Ω 3. Bread Board 4. DC Regulated Power supply (0 - 30 V variable) 5. Multimeter 6. Connecting wires	1 1 1 1 1 As Required
8.	Characteristics of BJT 1. Transistor (No-BC548) 2. Resistors- 1k Ω , 470K Ω , 1M Ω 3. Bread Board DC Regulated Power supply (0 - 30 V variable) 5. Multimeter 6. Connecting wires Characteristics of SCR 1. D C Power Supply (0-128 V), (0-32V), 2. Voltmeter (0-100V) 3. SCR TYN604 4. Digital multimeter 5. Ammeters (0-100mA, 0-25mA, 0-1mA) 6. Resistors 1K Ω , 1K Ω 7. Bread board 8. Connecting Wires Characteristics of MOSFET 1. MOSFET (2N7000) 2. Bread board 3. resistor (1K Ω , 100K Ω) 4. DC power supply (0-30V) 5. Multimeter 6. Connecting Wires	1 1 1 1 1 As Required 1 1 1 1 1 1 As Required 1 1 1 1 1 As Required
9.	Design and analysis of Half wave and Full Wave rectifiers 1. Diodes (Si-1N4007) – 4 2. Resistor 1K Ω 3. Capacitor 100 μ F 4. Digital Multimeter 5. CRO 6. Transformer (6-0-6)V 7. Bread Board 8. Connecting Wires	1 1 1 1 1 1 1 As Required
10.	Measurement of displacement of LVDT 1. LVDT Kit 2. Multimeter	1 1

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(R 2021) Semester – III

TC3311 Yarn And Fabric Manufacturing Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Blow room Line	1
2.	Carding machine	1
3.	Drawing machine	1
4.	Comber preparatory	1
5.	combing machines	1
6.	Roving machine	1
7.	Ring Frame	1
8.	Cone / Cheese winding machine	1
9.	Pirn winding machine	1
10.	Loom with tappet shedding	1
11.	Loom with dobby shedding	1
12.	Loom with jacquard shedding	1
13.	Loom with drop box	1

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(R 2021) Semester – IV
TC3312 Fibre Science Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Microscope	1
2.	Weighing balance	1
3.	Conditioning Chamber	1
4.	Viscometer	1

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(R 2021) Semester – IV
TC3411 Wet Processing Preparation

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Jigger	1
2.	Winch	1
3.	Water Bath	1
4.	Tensile Strength Tester	1
5.	Computer colour Matching system	1
6.	PH Meter	2
7.	Weighing balance	1

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TT3581 Testing Of Textile Materials Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Baer Sorter	1
2.	Fibre Bundle strength tester	1
3.	Fibre Fineness tester	1
4.	Trash Analyzer	1
5.	Projection Microscope	1
6.	Wrap Reel	1
7.	Wrap Block	1
8.	Yarn Twist Tester	1
9.	Single Yarn Strength Tester	1
10.	Bundle yarn strength tester	1
11.	Ballistic Tester	1
12.	Yarn Unevenness tester	1
13.	Weighing balance	1
14.	Yarn appearance Board Winder	1
15.	Yarn appearance Board (Standards)	1
16.	Fabric tensile strength tester	1
17.	Fabric tearing strength tester	1
18.	Fabric Thickness Tester	1
19.	Fabric Stiffness Tester	1
20.	Fabric Crease Recovery Tester	1
21.	Fabric Bursting Strength Tester	1
22.	Fabric Abrasion Resistance Tester	1
23.	Fabric Pilling resistance tester	1
24.	Fabric air permeability tester	1
25.	Fabric Drape meter	1
26.	Lander-o-meter	1
27.	Crock meter	1

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(R 2021) Semester – IV
TC3412 Textile Chemical Analysis Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Beaker Dyeing machine	1
2.	Dye Bath	1
3.	Weighing Balance	1
4.	Stop Watch	1
5.	Soxhlet Apparatus	1
6.	Viscometer	1
7.	UV-Vis spectrophotometer	1

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(R 2021) Semester – V

TC3511 Textile Dyeing And Printing Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Stainless vats (500 ml)	30
2.	Water bath	5
3.	Thermometer	5
4.	Electronic weighing balance	1
5.	Stirrer	2
6.	Steam ager	1
7.	Padding mangle	1
8.	HHP Beaker dyeing machine	1
9.	Curing chamber	1
10.	Printing table	1
11.	Blocks	10
12.	Printing screens	10

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TC3512 Shade Matching And Quality Control Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Computer color matching with spectrophotometer.	1
2.	Colour matching cabinet	1
3.	Laundrometer	1
4.	Light Fastness Tester	1
5.	Crock meter	1
6.	Perspirometer	1
7.	Incubator	1
8.	Water Bath	1
9.	Weighing Balance	1
10.	Grey scales	1
11.	Conical flasks	2

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(R 2021) Semester – VI
TC3612 Textile Finishing Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Padding mangle	1
2.	Curing oven	1
3.	Water Bath	1
4.	Hand Dryer	1
5.	Weighing Balance	1
6.	Laundrometer	1
7.	Crease recovery tester	1

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TC3611 Dyeing Of Synthetic Textile Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Beaker Dyeing machine -	1
2.	Water Bath with heating facility	1
3.	Weighing Balance	1
4.	Hardness Meter	1
5.	pH Meter	1
6.	Jigger	1
7.	Padding mangle	1
8.	Computer color matching system	1
9.	Winch	1
10.	HTHP Soft flow dyeing machine	2