Faculty of Technology

B. Tech. Textile Technology

(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 175Ω, 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 KΩ, 100Ω 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- 1kΩ, 470KΩ, 1MΩ 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 1KΩ, 1KΩ 7. Bread board 8. Connecting Wires **Characteristics of MOSFET** 1. MOSFET (2N7000) 2. Bread board 3. resistor (1KΩ, 100KΩ) 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 1 As Required
9.	**Design and analysis of Half wave and Full Wave rectifiers** 1. Diodes (Si-1N4007) – 4 2. Resistor 1KΩ 3. Capacitor 100μF 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

Faculty of Technology

B. Tech. Textile Technology

(R 2021) Semester – III

TT3361 Pre-Spinning Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Ginning machine	1
2.	Blowroom line	1
3.	Carding machine	1
4.	Drawframe	1
5.	Comber lap preparatory machines	1 set
6.	Comber	1
7.	Roving frame	1
	(Note: Commercial or Miniature models of above machines can be installed)	

Faculty of Technology

B. Tech. Textile Technology

(R 2021) Semester – IV

TT3461 Fabric Manufacture laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Loom with tappet shedding	1
2.	Loom with dobby shedding	1
3.	Loom with jacquard shedding	1
4.	Loom with dropbox	1
5.	Looms with 5, 7 wheel take-up, weft replenishment	-

Faculty of Technology

B. Tech. Textile Technology

(R 2021) Semester – IV

TT3462 Fabric Structure Analysis Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Lab Desks	20
2.	Beesley's balance	5
3.	Crimp tester	5
4.	Electronic balance	2
5.	GSM Cutter	2
6.	Thread counting glass	30
7.	Magnifying glass	5

Faculty of Technology

B. Tech. Textile Technology

(R 2021) Semester – V

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.	GSM cutter	1
27.	Lander-o-meter	1
28.	Crock meter	1

Faculty of Technology

B. Tech. Textile Technology

(R 2021) Semester – VI

TT3661 Textile Chemical Processing Laboratory

Sl.No.	Description of Equipment	Required members (for batch of 30 students)
1.	Stainless vats (500 ml each)	30
2.	Water bath	5
3.	Thermometers	5
4.	HTHP Beaker dyeing machine	6
5.	Electronic weighing balance	1
6.	Stirrer	1
7.	Steam ager	1
8.	Pilot curing chamber	1
9.	Hot air oven	1
10.	Printing table	1
11.	Blocks	10
12.	Printing Screens	10
13.	Laundro meter	1
14.	Crock meter	1
15.	Spectrophotometer	1
16.	Colour matching cabinet	1
17.	Grey scales	1 set