**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
**DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

# CONTROL SYSTEM LAB

| Prof. T Vinaykumar | Mr. Raghunath C N | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDER |

Control Systems Lab

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
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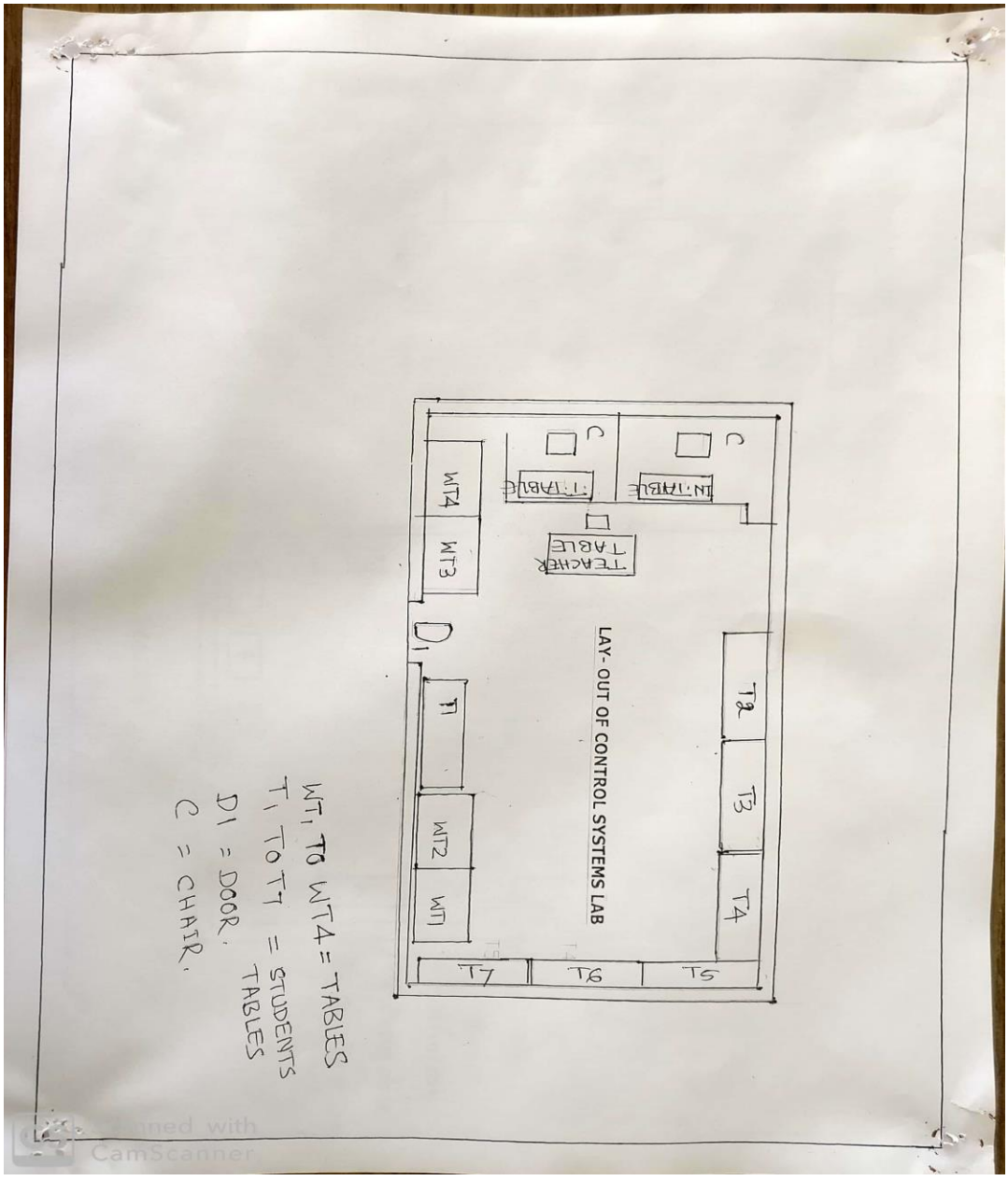
| Lab Area | 82.30 Sq. m |
|---|---|



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| Sl. No | Equipment's | Quantity |
|---|---|---|
| 1 | **Cathode ray Oscilloscope(Double beam) 25Mhz** | **2 Nos.** |
| 2 | **Cathode ray Oscilloscope(Double beam) 25Mhz** | **2 Nos..** |
| 3 | **Control Transmitter(Synchro Control Transmitter)** | **2 Nos.** |
| 4 | **Frequency response characteristics of Second order system** | **2 Nos.** |
| 5 | **Computation of gain cross over frequency & phase cross frequency for a third order system** | **2 Nos.** |
| 6 | **PI,PD,PID Controller(study response)** | **2 Nos.** |
| 7 | **Study of Compensating network** | **2 Nos.** |
| 8 | **D.C Servo Motor Kit** | **2 Nos.** |
| 9 | **Two Phase AC Servo Motor Kit** | **2 Nos.** |
| 10 | **Second Order System** | **2 Nos.** |
| 11 | **Digital Storage Oscilloscope Model No.6025, 25MH** | **1 Nos.** |
| 12 | **CRO 30MHZ(Double Beam)** | **4 Nos.** |
| 13 | **Function generator 1 MHz ( Multitech Make) Model No.MTSDFG** | **4 Nos.** |

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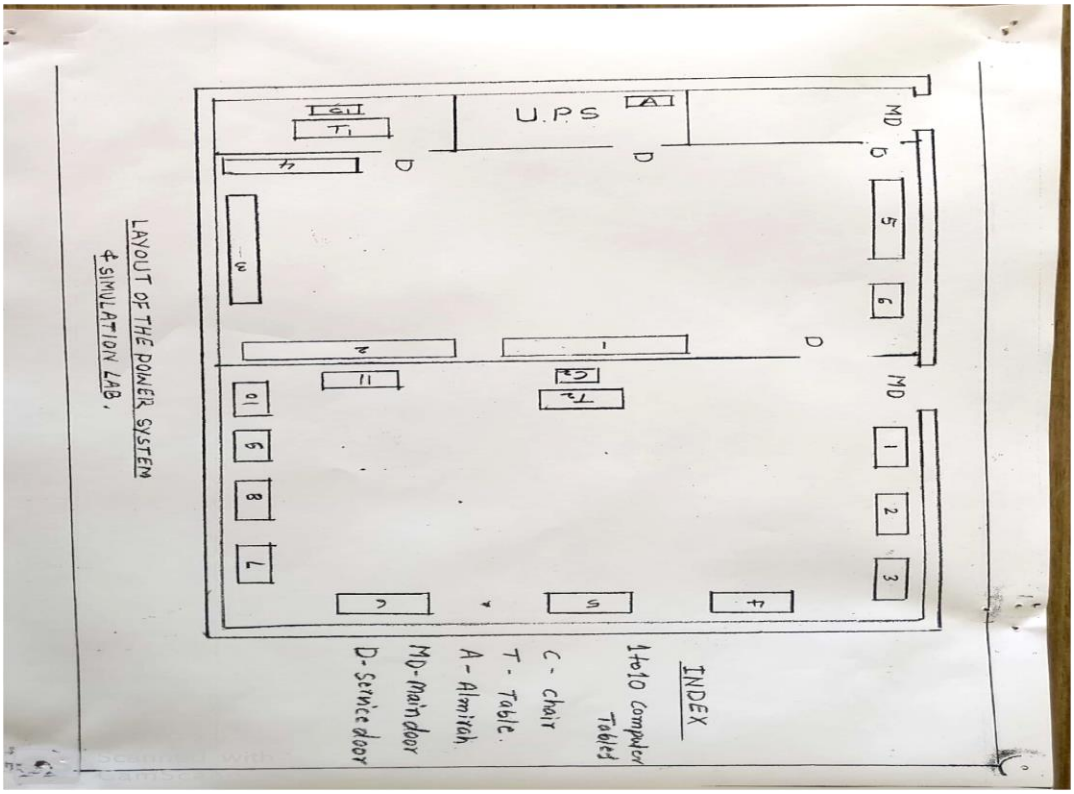
# POWER SYSTEM SIMULATION LAB

| Prof. Prakash Udgire | Mr. Ashok kumar | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDER |



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Power Systems Simulation Lab

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
**DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

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| **Lab Area** | | **84.29 Sq. m** |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **Computers** | **30Nos.** |
| 2 | **UPS 5KVA** | **01 No.** |
| 3 | **LCD Projector** | **01 No.** |
| 4 | **UPS 5KVA on line** | **01 No.** |

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# DIGITAL SIGNAL PROCESSING LAB

| Prof. Sulakshana.W | Mr. Ashok kumar | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDE |

Digital Signal Processing Lab

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| Lab Area | | 84.29 Sq. m |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **Computers** | **15** |
| 2 | **Projector** | **01** |
| 3 | **UPS 5 KVA** | **01** |

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
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# MICROCONTROLLER LAB

| Prof. T Vinaykumar | Mr. Raghunath C N | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDER |

| **Lab Area** | | **56.62 Sq. m** |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **Microcontroller 8051,Anshuman** | **15** |
| 2 | **Microcontroller 89C51,Anshuman** | **10** |
| 3 | **Microcontroller Application Boards** | **12** |
| 4 | **LCR Meter ICR 8C Unique** | **01** |
| 5 | **Digital Multi meter** | **03** |
| 6 | **C Complier for 8051** | **01** |
| 7 | **UPS 10 KVA on line 3Phase** | **01** |

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
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# RELAY AND HIGH VOLTAGE LAB

| Prof. Deepak Ghode | Mr. Raghunath C N | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDER |

Relay & High Voltage Engg. Lab

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
**DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

| Lab Area | | 150 Sq. m |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **I.D.M.T. over current Relay Type RSA-410B** | **01** |
| 2 | **Instantaneous over current Relay Type RSM-420** | **01** |
| 3 | **Instantaneous over current Relay Type PA221** | **01** |
| 4 | **Definite Time Lag Over Voltage relay** | **01** |
| 5 | **Under Voltage Relay Type PV** | **01** |
| 6 | **Static Time delay Relay Type PV** | **01** |
| 7 | **Static I.D.T.M.Earth Fault Relay Type JSRSA-110** | **01** |
| 8 | **Power Pack unit JDC-110** | **01** |
| 9 | **1 Phase Auto -Transformer** | **02** |
| 10 | **Oil Testing set 0-60 KV** | **01** |
| 11 | **IDMT Over current Relay kit (Electromechanical)** | **01** |
| 12 | **Under Voltage and Over Voltage Microprocessor Relay kit** | **01** |
| 13 | **Negative sequence Relay kit with high voltage Made Relay** | **01** |
| 14 | **Electrolytic Tank for Field Mapping** | **01** |
| 15 | **30kv AC/40kv DC Test Set** | **01** |
| 16 | **Control Panel of 30kv AC/40kv DC Test Set** | **01** |
| 17 | **50mm Sphere Gap Cum Rod Gap Apparatus** | **01** |
| 18 | **Motor Protection System** | **01** |

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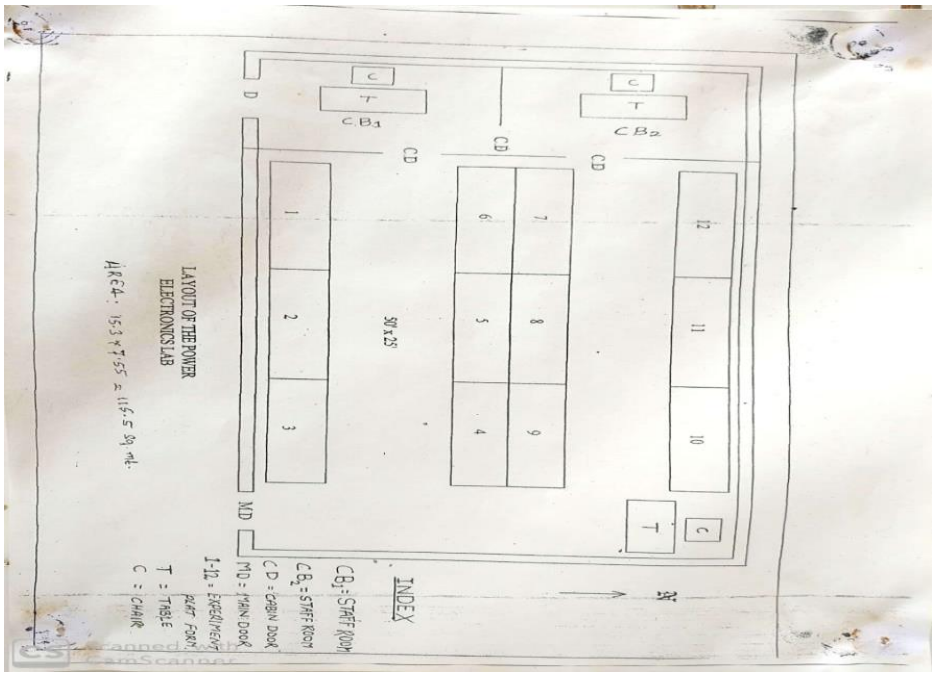
|---|---|---|
| 19 | **Merz Price generator Protection Scheme** | **01** |

# GURU NANAK DEV ENGINEERING COLLEGE, BIDAR
## DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

## POWER ELECTRONICS LAB

| Prof. Rohini D | Mr. Ashok kumar | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDER |



**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
**DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

Power Electronics Lab

| **Lab Area** | | **119.47 Sq. m** |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **CRO(Systronics)** | **08** |
| 2 | **Power Supply Dual (Systronics)** | **05** |
| 3 | **Function Generator (Systronics)** | **02** |
| 4 | **Function Generator (Systronics)** | **02** |
| 5 | **Magnoscope(vaiseshika)** | **02** |
| 6 | **UJT relaxation oscillator (EUTECH,UDAY)** | **03** |
| 7 | **SCR Characteristics (Eutech,Uday)** | **02** |
| 8 | **Milliammeter (AC)** | **02** |
| 9 | **Milliammeter (DC)** | **10** |
| 10 | **MOSFET Characteristics (Eutech,Uday)** | **02** |
| 11 | **IGBTCharacteristics (Eutech,Uday)** | **02** |
| 12 | **Digital Triggering Ckt (Eutech,Uday)** | **02** |

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|---|---|---|
| 13 | **Semiconverter DC Motor (Eutech)** | **01** |
| 14 | **DC Motor shunt** | **01** |
| 15 | **D-Auxiliary commutation(Eutech)** | **01** |
| 16 | **Stepper Motor control(Eutech,Uday)** | **02** |
| 17 | **1 phase induction motor control (Eutech)** | **01** |
| 18 | **1 phase control by traic-diac** | **01** |
| 19 | **1 phase induction motor 0.5Hp,220v** | **01** |
| 20 | **3 phase induction motor 0.5Hp, 415v** | **01** |
| 21 | **3phase induction motor control (Eutech)** | **01** |
| 22 | **1 phase full wave with R-RL** | **01** |
| 23 | **DC motor control using IGBT-MOSFET Chopper** | **01** |
| 24 | **Universal Motor control unit (Uday)** | **02** |
| 25 | **Universal Motor** | **01** |
| 26 | **MOSFET,IJBT Based 1 phase full wave bridge inverter** | **01** |
| 27 | **3 phase Variac** | **01** |
| 28 | **1phase Variac** | **03** |
| 29 | **Hand Tachometer(Analog)** | **02** |
| 30 | **Hand Tachometer(Digital)** | **02** |
| 31 | **Digital Multimeter** | **01** |
| 32 | **DC Voltmeter** | **10** |
| 33 | **DC motor series** | **01** |
| 34 | **Digital IC Trainer kits** | **20** |

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
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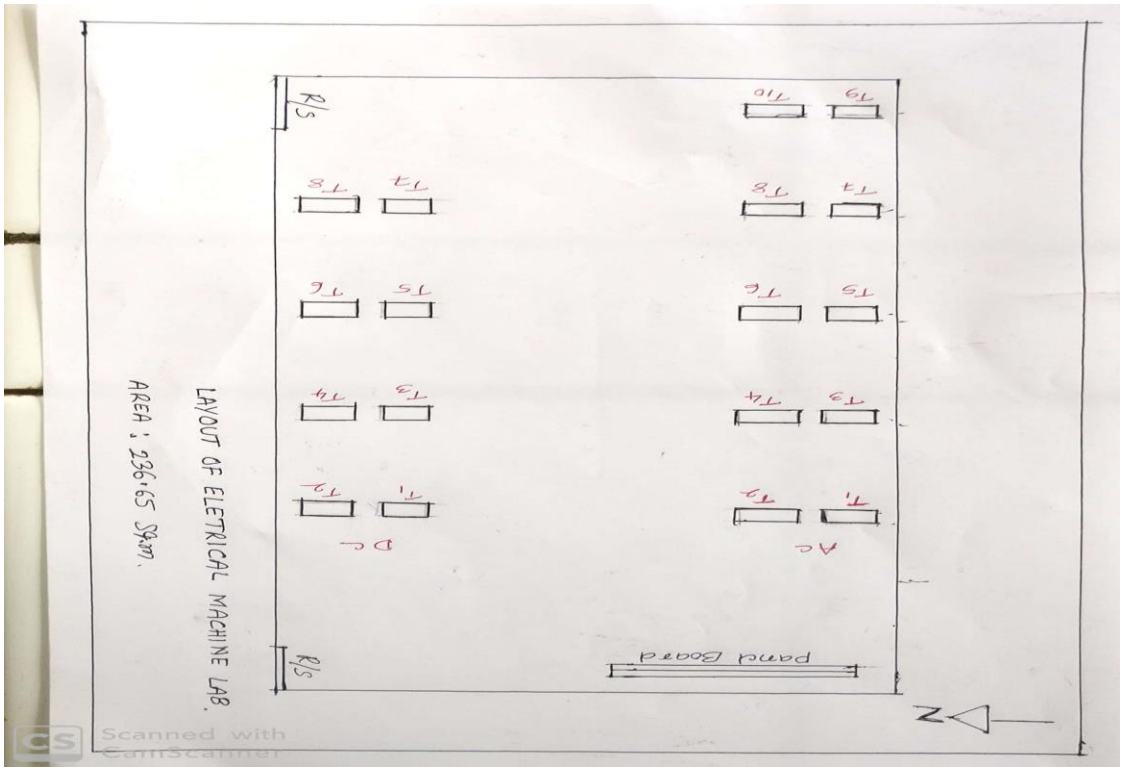
| Prof. Prashant Ghongde | Mr. Ashok kuma | Mr. Omkar |
|---|---|---|
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDER |



**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
**DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

Electrical Machines Lab

| **Lab Area** | | **236.65 Sq. m** |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **AC-DC MG Set Squirrel cage induction motor DC Motor 3.75Kw** | **1 No.** |
| 2 | **AC-DC MG Set Slipring Induction motor** | **1 No** |
| 3 | **AC-DC MG Set Squirrel cage induction motor DC Motor 3Kw** | **1 No.** |
| 4 | **DC-AC MG Set DC Motor 3Kw-3Kva(Alternator)** | **2 Nos.** |
| 5 | **DC-AC MG Set DC Motor 5HP-3Kva(Alternator)** | **2 Nos.** |
| 6 | **DC-DC MG Set5HP 3KW** | **2 Nos.** |
| 7 | **DC-DC MG Set5HP 3KW** | **1 No.** |
| 8 | **Electrical Machine Tutor** | **1 No.** |
| 9 | **Inductive load 3 phase 4-24amps 440v** | **1 No.** |
| 10 | **Inductive load 1 phase 4-24 amps 23v** | **1 No.** |
| 11 | **Synchronous motor and DC generator** | **1 No.** |

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|---|---|---|
| 12 | **Squirrelcage induction motor 7.5hp 440v** | **1 No.** |
| 13 | **Rectifier 3 phase 68 Amps** | **1 No.** |
| 14 | **Induction generator 3 phase** | **1 No** |
| 15 | **Transformer 2 kva 1:2 ratio 220/440** | **3 Nos.** |
| 16 | **Transformer 3kva 1 phase 230/230v** | **3 Nos.** |
| 17 | **Transformer 5kv 3phase** | **1No.** |
| 18 | **Autotransformer 3 phase 15 Amps** | **2Nos.** |
| 19 | **Autotransformer 3 phase 20 Amps** | **1No.** |
| 20 | **Labin loading Rheostat 1 phase 2.5kw** | **1No.** |
| 21 | **Labin loading Rheostat 1 phase 5kw** | **1No.** |
| 22 | **Labin loading Rheostat 3 phase 3kw** | **1No.** |
| 23 | **Labin loading Rheostat 1 phase 7.5kw** | **1No.** |
| 24 | **1 HP 220V 1500rpm DC shunt machine for Hopkin son's test (Two similar machine)** | **1No.** |
| 25 | **3 phase induction motor 3 HP 415V with mechanical loading** | **1No.** |
| 26 | **1 phase induction motor capacitor start 2 HP 230v 1440rpm with mechanical loading** | **1No** |
| 27 | **1 phase induction motor capacitor start 2 HP 230v 1440rpm** | **1No.** |
| 28 | **1 phase scott connected transformer 2 kva** | **2Nos.** |
| 29 | **Autotransformer 3 phase 20 Amps ,output 0-470** | **3Nos** |
| 30 | **Transformer 1kva 1 phase 220/440v** | **2Nos.** |
| 31 | **Transformer 1kva 1 phase 220/220v** | **3Nos.** |
| 32 | **To study of speed control of three** | **1No.** |

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|---|---|---|
| | **phase induction motor2 HP, 50Hz using(a) voltage control (b) constant (Voltage/frequency control) AC drive** | |
| 33 | **1 phase Resistive load 230v, 5kw** | **2Nos.** |
| 34 | **3phase Resistive load 230v,5kw** | **2Nos.** |

## BASIC ELECTRICAL ENGINEERING LAB

Prof. Megha — LAB INCHARGE

Mr.Mantesh — LAB INSTRUCTOR

Mr. Omkar — LAB ATTENDER

**GURU NANAK DEV ENGINEERING COLLEGE, BIDAR**
**DEPARMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

Basic Electrical Engineering Lab

| **Lab Area** | | **84.29 Sq. m** |
|---|---|---|
| **Sl. No** | **Equipment's** | **Quantity** |
| 1 | **KCL & KVL DC Circuit kit,** | 02Nos. |
| 2 | **Measurement of Inductance of Choke Coil Set,** | 02Nos. |
| 3 | **Two Way and Three Way Control of lamp Kit ,** | 01No. |
| 4 | **Earth Resistance kit,** | 01No. |
| 5 | **Measurement phase & line quantities** | 03Nos. |
| 6 | **Measurement of Power ,P.F of Different lamps** | 01No. |
| 7 | **Measurement 3 phase power using 2 wattmeter method,** | 01No. |
| 8 | **Determination of Fault in fuse & MCB** | 01No. |
| 9 | **Cut Section of Electric machine** | 01No. |
| 10 | **Three phase Inductive load ,** | 01No. |
| 11 | **Three phase Varaic load,** | 01No. |

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**ELECTRONICS LAB**

| | | |
|---|---|---|
| Prof. Sulakshana.W | Mr. Ashok kumar | Mr. Omkar |
| LAB INCHARGE | LAB INSTRUCTOR | LAB ATTENDE |

# GURU NANAK DEV ENGINEERING COLLEGE, BIDAR
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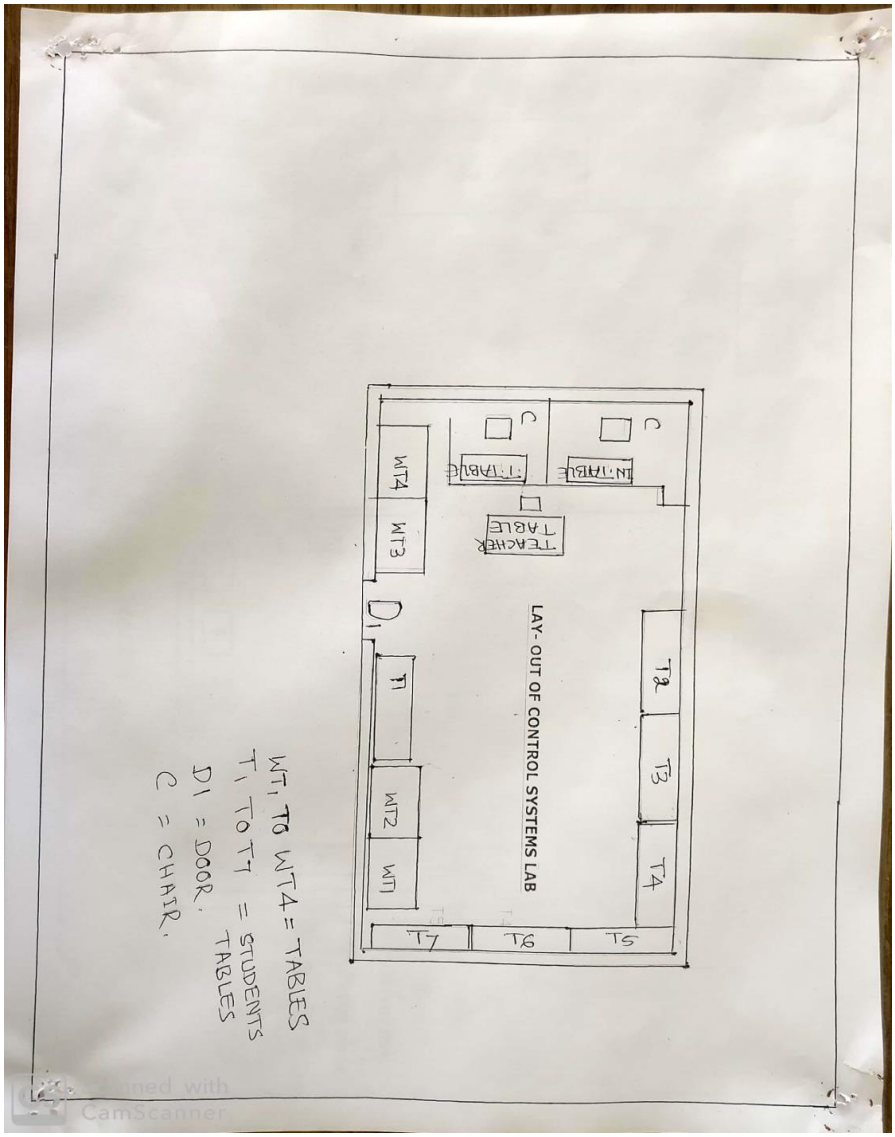

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Electronics Lab