

INFRASTRUCTURE

DETAILS OF LABORATORIES

SL NO	NAME OF THE LAB	AREA (Sq m)	ROOM NO
1	Electrical & Electronics Lab/Project Lab	75	119
2	Electrical Machines Lab I/Electrical Machines Lab II	90	111
3	Circuits & Measurements Lab	75	409
4	Systems & Control Lab/Power System Lab	65	201B
5	Power Electronics & Drives Lab	65	201A
6	Electrical Workshop	80	105
		Total Lab Area = 450 Sq m	

FACILITIES IN THE LABORATORIES

ELECTRICAL MACHINES LAB I

FACILITIES

❖ Testing of the following DC machines :-

- DC shunt motor
- DC series motor
- DC compound motor
- DC shunt generator

❖ Testing of transformers:-

- 1 ϕ and 3 ϕ transformer
- Air core transformer
- 1 ϕ and 3 ϕ auto transformer

ADDITIONAL FACILITIES

❖ Loading systems

- Water load
- Resistive load
- Inductive load
- Mechanical load

❖ DC power rectifiers 100A(2Nos)

❖ DC power supply units (2Nos)

❖ AC & DC measuring equipments

❖ Speed measuring devices(contact & non contact type)

❖ Portable rheostats of variable resistances

❖ Retardation test

FACILITIES IN THE LABORATORIES

ELECTRICAL MACHINES LAB II

FACILITIES	ADDITIONAL FACILITIES
<p>❖ Testing of the following AC machines :-</p> <ul style="list-style-type: none">➤ 1ϕ and 3ϕ induction motors(Squirrel Cage ,Slip Ring& Pole Changing)➤ 3ϕ induction generators➤ 3ϕ synchronous generators➤ 3ϕ synchronous motors <p>❖ Speed control of induction motors by various techniques :-</p> <ul style="list-style-type: none">➤ By Variable Voltage/Variable Frequency➤ By pole changing➤ By adding rotor resistance	<p>❖ Loading systems</p> <ul style="list-style-type: none">➤ Water load➤ Resistive load➤ Inductive load➤ Mechanical load <p>❖ DC power rectifiers 100A(2Nos)</p> <p>❖ DC power supply units (2Nos)</p> <p>❖ AC & DC measuring equipments</p> <p>❖ Speed measuring devices(contact & non contact type)</p> <p>❖ Portable rheostats of variable resistances</p> <p>❖ Retardation test</p>

ELECTRICAL MACHINES LAB I / ELECTRICAL MACHINES LAB II



AREA
(Sqm)

ROOM
NO

90

111

FACILITIES IN THE LABORATORIES

CIRCUITS & MEASUREMENTS LAB



FACILITIES

- ❖ Calibration of 1ϕ and 3ϕ (Energymeter, Wattmeter, Potentiometer)
- ❖ Verification of various network theorems
- ❖ Determination of LMK
- ❖ Testing of CT & PT

ADDITIONAL FACILITIES

- ❖ Extension of ammeter & voltmeter range
- ❖ Calibration of energy meter using phase shifting transformers
- ❖ Calibration of wattmeter by vernier potentiometer
- ❖ Calibration of energymeter

AREA
(Sqm)

75

ROOM NO

409

FACILITIES IN THE LABORATORIES

SYSTEMS & CONTROL LAB

FACILITIES

- ❖ PLC Trainer kit
- ❖ P,PI,PID Trainer Kit
- ❖ DC & AC servomotor

ADDITIONAL FACILITIES

- ❖ MATLAB

POWER SYSTEM LAB

FACILITIES

- ❖ Operations of power systems like relay setting & fault calculation using software (MATLAB & mi-power)
- ❖ Simulations of power systems operations

ADDITIONAL FACILITIES

- ❖ Testing of various power system components like CT & PT



AREA (Sqm)	ROOM NO
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65

201 B

FACILITIES IN THE LABORATORIES

POWER ELECTRONICS & DRIVES LAB

FACILITIES

- ❖ Design of firing circuits using R,RC ,UJT
- ❖ Operation of 1ϕ full converter for R & RL load
- ❖ 1ϕ PWM inverter
- ❖ Design of TRIAC
- ❖ Speed control of DC motors using choppers

ADDITIONAL FACILITIES

- ❖ MATLAB Facilities
- ❖ CRO's(10 nos)
- ❖ 1ϕ transformers
- ❖ Autotransformers(5 nos)



AREA
(Sq.m)

65

ROOM
NO

201 A

FACILITIES IN THE LABORATORIES

ELECTRICAL WORKSHOP

FACILITIES

ADDITIONAL FACILITIES

- ❖ Basic wiring practice
- ❖ 1 ϕ power measurement using wattmeter, ammeter, & voltmeter
- ❖ Fluorescent lamp
- ❖ House wiring system
- ❖ Earthing practice

- ❖ Megger
- ❖ Earth resistance meter



AREA
(Sqm)

ROOM NO

80

105

SAFETY MEASURES IN LABORATORIES

- **Safety Norms & Checking Of Electrical Installations**

- ELCB's provided in all DB's
- Provided earthing to all vital equipments
- Provided rubber mat in all labs

- **Fire Fighting Measures**

- Installed portable fire extinguisher (5 nos)
- Provided fire & sand bucket (5 nos)

- **Safety Of Civil & Mechanical Structures**

- Good quality Truss work provided over roof to protect the civil structures

- **First Aid**

- Full fledged kit provided to all labs