



4.1.1 The Institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc. Describe the adequacy of facilities for teaching – learning as per the minimum specified requirement by statutory bodies within a maximum. 200 words

Additional information

Table 4.1.1 Institutional Physical Facility

Facility	Required Numbers/Area in m ²	Available	
Land Area Requirement	30352	193925.36	
Total Number of Class Rooms	72 Class Rooms	78 Class Rooms	
Sports club/Gymnasium	1 (200m ²)	1 (2017 m ²)	
Auditorium	1 (400m ²)	1 (926 m ²)	
Library	1 (800m ²)	1 (1981 m ²)	
Computers	600 Computers	1443 Computers	
Internet Bandwidth	100 Mbps	155 Mbps	
Wifi Hotspots	5 Hotspots	75 Hotspots	
Drawing Hall	2 (132m ²)	HallE4	157.60 m ²
		HallE11	157.60 m ²

INFRASTRUCTURE DETAILS

Class rooms (No. of class rooms and covered area in m²)

S. No.	Room ID	Name of the Block	Department	Area (m ²)
1.	A1	A Block First Floor	BT	77.95
2.	A2	A Block First Floor	ECE	77.95
3.	A3	A Block First Floor	CSE	77.95
4.	A4	A Block First Floor	IT	77.95
5.	A5	A Block First Floor	CSE	77.95
6.	B1	B Block First Floor	BT	74.21
7.	B2	B Block First Floor	BT	74.21
8.	B3	B Block First Floor	BT	74.21
9.	PG3	B Block First Floor	BT (PG)	33.40
10.	PG4	B Block First Floor	BT (PG)	33.40
11.	C4	C Block First Floor	CSE	74.21
12.	C5	C Block First Floor	CSE	74.21
13.	C6	C Block First Floor	CSE	74.21
14.	C11	C Block Second Floor	PT	74.21
15.	C12	C Block Second Floor	PT	74.21
16.	C13	C Block Second Floor	PT	74.21
17.	C14	C Block Second Floor	MTR	85.46

18.	C15	C Block Second Floor	MTR	85.46
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S. No.	Room ID	Name of the Block	Department	Area (m ²)
19.	C16	C Block Second Floor	MTR	85.46
20.	C17	C Block Second Floor	MTR	85.46
21.	E4	E Block First Floor	CIVIL	77.96
22.	E5	E Block First Floor	CIVIL	77.96
23.	E6	E Block First Floor	CIVIL	77.96
24.	E7	E Block First Floor	CIVIL (PG)	77.96
25.	E8	E Block Second Floor	CIVIL	77.96
26.	E9	E Block Second Floor	CIVIL	77.96
27.	E10	E Block Second Floor	CIVIL	77.96
28.	E12	E Block Second Floor	CIVIL	77.96
29.	E13	E Block Second Floor	CIVIL	77.96
30.	E14	E Block Second Floor	MECH	77.95
31.	E15	E Block Third Floor	MECH	77.95
32.	E16	E Block Third Floor	MECH	77.95
33.	E18	E Block Third Floor	MECH (PG)	51.34
34.	E20	E Block Fourth Floor	MECH	77.95
35.	E21	E Block Fourth Floor	MECH	77.95
36.	E22	E Block Fourth Floor	MECH	77.95
37.	E24	E Block Fourth Floor	MECH (PG)	51.36
38.	E25	E Block Fourth Floor	MECH	77.95
39.	D1	D Block Ground Floor	CSE	77.96
40.	D2	D Block Ground Floor	CSE	67.07
41.	PG5	D Block Ground Floor	CSE	51.37
42.	PG6	D Block Ground Floor	SS	40.48



43.	D3	D Block First Floor	IT	77.92
44.	D4	D Block First Floor	IT	67.04

S. No.	Room ID	Name of the Block	Department	Area (m ²)
45.	PG7	D Block First Floor	SS	51.34
46.	PG8	D Block First Floor	IT	40.46
47.	D5	D Block Second Floor	ECE	77.95
48.	D6	D Block Second Floor	ECE	67.07
49.	D7	D Block Second Floor	ECE	72.52
50.	D8	D Block Second Floor	ECE	77.95
51.	D9	D Block Second Floor	ECE	77.95
52.	D10	D Block Second Floor	ECE	66.47
53.	PG9	D Block Second Floor	ECE (PG)	51.37
54.	PG10	D Block Second Floor	ECE (PG)	51.37
55.	D11	D Block Third Floor	EEE	77.95
56.	D12	D Block Third Floor	EIE	67.07
57.	D13	D Block Third Floor	EIE	72.52
58.	D14	D Block Third Floor	CIVIL (PG)	51.36
59.	D15	D Block Third Floor	PT	51.36
60.	D17	D Block Third Floor	EIE	77.95
61.	PG11	D Block Third Floor	PT (PG)	40.48
62.	PG12	D Block Third Floor	PT (PG)	51.36
63.	D18	D Block Fourth Floor	EEE	77.96
64.	D19	D Block Fourth Floor	EEE	67.07
65.	D20	D Block Fourth Floor	EEE	72.52
66.	D21	D Block Fourth Floor	EEE	77.96
67.	D22	D Block Fourth Floor	EEE	77.96
68.	D23	D Block Fourth Floor	EEE	66.48

69.	PG13	D Block Fourth Floor	EEE (PG)	51.37
70.	PG14	D Block Fourth Floor	EEE (PG)	51.37

S. No.	Room ID	Name of the Block	Department	Area (m ²)
71.	B7	B Block Second Floor	Additional classrooms for handling tutorial classes, for conducting Value Added Courses, placement training, language training (French, Hindi) etc.	86.21
72.	B8	B Block Second Floor		86.21
73.	B9	B Block Second Floor		86.21
74.	B10	B Block Second Floor		86.21
75.	C7	C Block First Floor		54.82
76.	PG1	C Block First Floor		33.78
77.	PG2	C Block First Floor		33.78
78.	D16	D Block Third Floor		51.36
			Total	5383.72

The following Halls are available with modern hi-tech public address system for conducting various events such as co-curricular activities/extra-curricular activities, recruitments, meetings/seminars, conferences, ceremonies etc.

Table 4.1.1 Available Halls

S.No.	HALL NAME	CAPACITY	Size (m ²)
1	T.S.K.THANUSKODI NADAR VELLAIYAMMAL MULTIPURPOSE HALL	1400	926
2	V.N.R.T. GURUSAMY NADAR RAJAMMAL MEMORIAL CONFERENCE HALL (CANTEEN BLOCK)	500	445
3	NJHA.V.DHANASAMY-PARIMALA DEVI DIGITAL LIBRARY BUILDING - EDUSAT HALL	175	242
4	DR(CAPT).M.PALANIAPPAN THENAMMAL & DR.P.NITHIYAM MDS MEMORIAL CHARITABLE TRUST CONFERENCE HALL-II	175	78

5	DR(CAPT) M.PALANIAPPAN THENAMMAL & DR.P.NITHIYAM MDS MEMORIAL CHARITABLE TRUST CONFERENCE HALL-I	75	157
6	ACADEMIC BLOCK IV - FIRST FLOOR- CONFERENCE HALL	75	78
7	MAIN CONFERENCE HALL (Near ATM)	75	131
8	MINI CONFERENCE HALL	50	96

BOYS HOSTEL



GIRLS HOSTEL



INFRASTRUCTURE FACILITIES

List of Laboratories along with Details of Equipment

S. No.	Name of the Laboratories	Name of the Equipments	Area in sq. ft.
A Block - Ground Floor			
1.	C Programming Laboratory / Object Oriented Programming Laboratory / Data Structures Laboratory	Systems with Linux Operating System with GNU compiler, C / C++ / Java	1825
B Block - Ground Floor			
2.	Data Structures Laboratory / Operating Systems Laboratory / Networks Laboratory	Systems with Linux Operating System with gnu compiler Standalone Desktops, C / C++ / Java / Python / Equivalent Compiler Network Simulator like NS2 / Glomosim / OPNET / Packet Tracer	1277
3.	Mobile Application Development Laboratory	Standalone desktops with C / C++ / Java compiler GnuPG, Snort, N-Stalker	1584
4.	Bioprocess Laboratory / Microbiology Laboratory	Batch Reactor, Continuous Fermentor, Modular Baby Fermentor, Ultra Low Freezer(-85°C), Deep Freezer (-20°C), Peristaltic Pump, Refrigerated Water bath	1020
5.	Downstream Processing Laboratory / Analytical Methods and Instrumentation Laboratory	Photo-flurometer, UV Spectrophotometer, Turbidity meter, Sonicator, Homogenizer, AKTA Prime Purification System, HPLC Lyophilizer, Spray Drier	972
6.	Research Lab	Photo bioreactor, UV Spectrophotometer, Shaker incubator, Fluorescent Spectrophotometer, Foam fraction meter	838
B Block - First Floor			

7.	Bioinformatics Laboratory	ACER systems; 2GB RAM with Intel core 2 Processor, Windows OS (30 Nos.)	1040
8.	Biochemistry Laboratory / Cell Biology Laboratory	UV-Visible Spectrophotometers, pH meter, Centrifuge, Autoclave, Hot Air Oven, Incubators, Light Microscopes, Colorimeter, Lamina Flow Chamber, Inverted Microscope, Fluorescence Microscope, CO ₂ Incubator, Deep Freezer (-20°C), Olympus Microscope, Hot Plate, Heating Mantle, Altech Distillation Unit, Melting Point apparatus, Water bath, Soxhlet apparatus	1760
9.	Molecular Biology Laboratory / Genetic Engineering Laboratory / Immunology Laboratory	Gel Documentation, Gel Rocker, Electrophoresis Unit, PCR, ELISA Reader, ELISA Washer, Electroporator, Water Purification system, Refrigerated Centrifugation	1532
B Block - Second Floor			
10.	Immuno Technology Laboratory / Bioprocess and Downstream Processing Laboratory / Preparative and Analytical Techniques In Biotechnology / Advanced Genetic Engineering Laboratory	Gel Documentation System, Gas Analyzer, HPLC, CO ₂ Incubator, Bio reactors, ELISA Plate reader, -85 degree Celsius freezer	1040
C Block - First Floor			
11.	Physics Research Laboratory	Muffle Furnace, Ultrasonicator Bath, Ball mill	557
D Block - Ground Floor			
12.	Case Tool Laboratory / Security Laboratory / Compiler Lab / Operating System Lab	Systems with Linux Operating System, Open Source: ArgoUML, Eclipse IDE, KF Sensor, Snort, Net Stumbler, C / C++ / Java	1825
13.	Data Structures Laboratory / Project Laboratory	Systems with Linux Operating, GNU compiler, NetBeans, Eclipse, C++, Java, Arduino	1411

14.	Grid And Cloud Computing Laboratory / Computer Graphics Laboratory	Globus Toolkit, Eucalyptus, open Nebula, DOS BOX, Anaconda, Arduino, Open CV	1411
15.	Database Management Systems Laboratory / Internet Programming Laboratory / Network Laboratory	Dual OS Windows / Linux Systems with Maria DB Server, Visual Studio, Java / JSP / ISP Webserver / Apache Tomcat / Netbeans, Dreamweaver, WAMP / XAMP Server (Web Server), NS2	838
D Block - First Floor			
16.	Database Management Systems Laboratory / Data Mining Laboratory / Grid and Cloud Computing Laboratory	Systems with MySql, Server, Visual Studio, WEKA, Rapid Miner, DB Miner, Standalone desktops, Globus Toolkit or Eucalyptus or open Nebula, Standalone desktops	1277
17.	Object Oriented Programming Laboratory / Object Oriented Analysis And Design Laboratory / Web Technology Laboratory	Systems with either Netbeans or Eclipse, ArgoUML, StarUML, Visual Paradigm (Or) Eclipse IDE and Junit, Rational Suite (User License), PCs Dream Weaver, MySQL, Apache Server, WAMP / XAMPP, Standalone desktops	1277
18.	Security Laboratory	C / C++ / Java compiler, Standalone desktops, GnuPG, KF sensor, Snort, Net Stumbler	838
D Block - Second Floor			

19.	Digital Signal Processing Laboratory / VLSI Design Laboratory	Analog Discovery kit (signal Generator + CRO together), CRO (20MHz), Signal Generators (1MHz), MATLAB with Simulink and Signal Processing Tool Box or Equivalent Software in desktop systems, PCs with Fixed / Floating point DSP Processors (Kit / Add-on Cards), Xilinx ISE / Altera Quartus / equivalent EDA Tools, Cadence / Synopsis / Mentor Graphics / Tanner / EDA Tools, Personal Computer, Xilinx / Altera / equivalent FPGA Boards	1412
20.	Communication Systems Laboratory / Networking Laboratory	Qualnet / Optisim / Matlab / NS2 / Netsim, Standard LAN Trainer Kits, C / Python / Java / Equivalent Compiler, PC with NS3 / OMNET / Scilab / equivalent software (user license), Micro strip Device (Compatible with source & measuring instruments) Couplers, Antennas, Filters, DSP Processor kit, Vector Network Analyzer (min 1GHz), SDR Kit, Spectrum Analyzer (min 1GHz)	1412
D Block - Third Floor			

21.	Linear and Digital Integrated Circuits Laboratory / Microprocessors and Microcontrollers Laboratory	Transistor 2N3391, Single Strand Wire, Resistors 1 / 4 Watt Assorted, Potentiometer, LM723, LM317, LED, IC Tester (Analog), ICSG3524 / SG3525, Capacitor, Computer (PSPICE installed), Zener diodes, CRO (30MHz) Digital IC types, Digital Multimeter, Diodes (IN4001, BY126), Dual ,(0-30V) variable Power Supply, Function Generator (1MHz), IC 741 / IC NE555 / 566 / 565, Step-down transformer (230v / 12-0-12v), Bread board, AC & DC motor with Controller, Traffic Light Control System, 8051 Micro Controller Trainer Kit with power supply, 8085 Microprocessor Trainer with Power Supply, 8251 Interface board, 8254 timer counter, 8255 Interface board, 8259 Interface board, 8279 Keyboard / Display Interface board, ADC and DAC card	1125
22.	VLSI Design Laboratory / System laboratory	Cadence / MAGMA / Tanner or equivalent software package, Xilinx software, Xilinx or Altera FPGA, PCs	1411
D Block - Fourth Floor			

23.	Electric Circuits Laboratory / Linear and Digital Integrated Circuits Laboratory / Power Electronics And Drives Laboratory	AC / DC – Voltmeters, Ammeters, Decade Resistance, Decade Inductance, Decade Capacitance Boxes, Digital Storage Oscilloscope (20 MHz), Scilab / Matlab / PSIM, Function Generator (1 MHz), Multi-meters, PC With Circuit Simulation Software (10 Users), Regulated Power Supply: 0 - 15 V D.C, Single Phase Energy Meter, Single Phase Wattmeter, Dual ,(0-30V) variable Power Supply, ICs, Potentiometer, Resistors 1 / 4 Watt Assorted, Step-down transformer 230V / 12-0-12V, Computer (PSPICE installed), CRO, MOSFET based step up and step down choppers, SCR & TRIAC based 1 phase AC controller along with lamp or rheostat load, Single phase Auto transformer, Single phase SCR based half controlled converter and fully controlled converter along with built-in / separate / firing circuit / module & meter, Switched mode power converter module / Discrete Component, Cyclo converter kit with firing module, Dual regulated Dc power supply with common ground, IGBT based single phase PWM inverter module/Discrete Component, IGBT based three phase PWM inverter module/Discrete Component, Isolation Transformer, LCR meter	141 2
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24.	Electrical Machines Laboratory I / Electrical Machines Laboratory II	DC Shunt Motor with Loading Arrangement, DC Shunt Motor Coupled With Three phase Alternator, DC Shunt Motor Coupled With DC Shunt Generator, DC Shunt Motor Coupled With DC Compound Generator, DC Series Motor with Loading Arrangement, DC Compound motor with loading arrangement, Single Phase Induction Motor with Loading Arrangement, Three Phase Resistive Loading Bank, Three Phase Induction Motor with Loading Arrangement, Three Phase Auto Transformer, Tachometer – Digital / Analog, Single Phase Transformer, Single Phase Auto Transformer, Single Phase Resistive Loading Bank, DC Shunt Motor Coupled With Three phase Slip ring Induction motor, Capacitor Bank, Three Phase Induction Motor with Loading Arrangement, Synchronous Induction motor 3HP, BLDC Motor	1998
25.	Power System Simulation Laboratory / Advanced Power System Simulation Laboratory	Printer laser, Server (Pentium IV, 80GB, 1GB RAM) (High speed processor), Personal computers (Pentium - IV, 80GB, 512 MB RAM), Dot matrix Printer, Compilers C, C++, VB, VC++, Server (Intel Core i3, 4 GB RAM) (High Speed Processor), Software: EMTP / ETAP / CYME / MIPOWER / Matlab / any Power system simulation software, Compilers: C / C+ +, Personal Computers (Intel Core i3, 250 GB, 1 GB RAM)	858

E Block - Ground Floor			
26.	Surveying Laboratory	Arrows (set), Ranging rods (set), Survey grade or Hand held GPS, Surveyor Compass, Tapes (set), Theodolites, Pocket stereoscope, Leveling staff (set), Dumpy level / Filling level, Cross staff(set), Prismatic Compass, Total Station, Chains (set)	838
27.	Water And Waste Water Analysis Laboratory	Beaker1000mL, Weighing machine (0.0001g), DO meter, Jar test apparatus, Nephelometer, pH meter, Water bath, Test tubes 20mL, UV and Visible Spectrophotometer, Imhoff cone, Sterilization chamber, Nessler's tube 100 mL, Weighing machine (0.001g), Volumetric flask 50mL, Volumetric flask500mL, Volumetric flask 250mL, Volumetric flask 250mL, Volumetric flask100mL, Volumetric flask1000mL, Refrigerator, Pipette 5mL, Pipette 2 mL, Pipette 10mL, Muffle furnace, Measuring jar 50mL, Measuring jar 500mL, Measuring jar 10mL, Measuring jar 100mL, Measuring jar 1000mL, Hot air oven, Conical flask 10 mL, Conductivity meter, Compound microscope, COD digester (with 6 heating mantle), China dish, Burette 50mL with stand, Burette 25mL with stand, BOD incubator, Beaker 500mL, Beaker 100mL, Autoclave, Bacteriological incubator	838

28.	Soil Mechanics Laboratory	Three gang consolidation test device, Thermometer, Hydrometer, Liquid and plastic limit apparatus, Proctor compaction apparatus, Relative Density apparatus, Sand replacement method accessories and core cutter method accessories, Shrinkage limit apparatus, Sieves, Direct shear apparatus, Weighing machine 1kg capacity, Weighing machine 20kg capacity, Van Shear apparatus, UTM of minimum of 20KN capacity, Triaxial shear apparatus	833
29.	Computer Aided Design and Drafting Laboratory / Computer Aided Building Drawing	Computers Pentium IV, Models of Structures, Analysis and Design Software - Minimum 5 use License, AUTOCAD	838
30.	Information Technology Essentials Laboratory / Problem Solving And Python Programming Laboratory	Mobile App Development tool (Like app Inventor), PC with Linux / Windows / Solaris / Mac OSX operating system, XAMPP Webserver, Server with Python (3 interpreter for Windows / Linux), Standalone desktops with Python (3 interpreter for Windows / Linux)	1118
31.	C Programming Laboratory / Problem Solving And Python Programming Laboratory	Systems with Linux Operating System with gnu Compiler, Server with Python (3 interpreter for Windows / Linux), Standalone desktops with Python (3 interpreter for Windows / Linux)	1118
E Block - First Floor			

32.	Research Lab	HP workstation (7 Nos.), HML10V2 XEON processor 3.5GH, 16GB DDR3 / 1 TB hard disk, AMD FIREPRO, 4GB graphics card 27" LED Monitor	534
E Block - Third Floor			
33.	CAD / CAM Laboratory / Simulation and Analysis Laboratory / Computer Aided Machine Drawing	Computer nodes or systems (High end CPU with atleast 1 GB main memory) networked to the server, Laser Printer, Licensed operating system, A3 size plotter, integrated modeling and manufacturing CAD / CAM software, CAM Software for machining centre and turning centre (CNC Programming and tool path simulation for FANUC / Sinumeric and Heidenhain controller), Computer Work Station , Color Desk Jet Printer, Multibody Dynamic software suitable for Mechanism simulation and analysis	838
Workshop Block - Ground Floor			
34.	Polymer Identification and Analysis Laboratory / Polymer Preparation Laboratory / Polymer Science Laboratory	Bunsen Burner, Thermostatic Water bath, Retort Stand, Polymer Samples and Glassware, Pipette, Melting Point Apparatus, Funnel, Electronic Balance, Burette, Vacuum Pump, Water distillation set up, Air oven, Heating Mantle, Magnetic stirrer, Ostwald / Ubbelohde viscometer, Thermogravmetric analysis (TGA), Vapour Pressure osmometer (VPO), Differential Scanning Calorimeter (DSC), Glassware for reactions and spot tests	3564

35.	Manufacturing Technology Laboratory	Center less grinding machine, Horizontal Milling Machine, CNC Lathe, CNC milling machine, Cylindrical Grinding Machine, Gear Hobbling Machine, Gear Shaper machine, lathe Tool Dynamometer, Milling Tool Dynamometer, Surface Grinding Machine, Tool and cutter grinder, Tool Makers Microscope, Turret and Capstan Lathes, Vertical Milling Machine	3042
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36.	Plastics Processing Laboratory / Rubber Processing Laboratory / Polymer Testing Laboratory / Polymer Processing Laboratory / Polymer Testing Laboratory	Mould for semiautomatic injection moulding, Air compressor, Electronic balance, Extruder for compounding of thermoplastics, Fully automatic blow moulding machine, Hand blow moulding machine, Injection moulding (Hand injection moulding machine, Semi Automatic injection moulding machine, Fully automatic injection moulding machine), Mould for automatic injection moulding, fully automatic blow moulding, hand blow moulding, hand injection moulding, Scrap grinder, Sheet cutter, Thermo Forming Unit, Bench wise, Bench grinding and buffing machine, Crane for mould handling, Moulds for Ballon, play thread, play ball, Hand gloves, sheets, and Rubber band, Moulds for M/C sheet moulding, Hand gloves, Ball mill, Compression moulding machine, Electronic balance, Moulds for flex specimen moulding, Two roll mill for rubber mixing, Sheet cutter, Dielectric Strength tester, De-Mattia Flex Resistance tester, Arc resistance tester, Volume and surface resistivity tester, Vicat softening point teste, Universal tensile testing machine, Shore - D hardness tester, Shore - A hardness tester, Rebound Resilience tester, Opacity tester, Izod and charpy impact tester, Falling dart impact tester, Environmental stress crack resistance tester (ESCR), Din Abrader, latex formers, rubber curing presses abrasion resistance testing equipment, specific gravity measuring equipment, MFI tester, electrical equipment for supplying high voltages, electrodes etc.	356 4
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37.	Engineering Practices Laboratory	<p>Power Tool: Angle Grinder, Welding accessories like welding shield, chipping hammer, wire brush, etc., Study purpose items: Telephone, FM radio, low-voltage power supply, Study purpose items: Iron box, fan and regulator, emergency lamp Study-purpose items: centrifugal pump, air-conditioner, Standard woodworking tools, Welding booth with exhaust facility, Small PCBs, Power Tools: (a) Rotary Hammer, Multi Meters, Soldering guns, Power Tools: (a) Range Finder, Oxygen and acetylene gas cylinders, blow pipe and other welding outfit, Assorted components for plumbing Consisting of metallic pipes, plastic pipes, flexible pipes, couplings, unions, elbows, plugs and other fittings. Carpentry vice (fitted to work bench), Circular Saw, Planer, Hand Drilling Machine, Jigsaw, Hearth furnace, anvil and smithy tools, Models of industrial trusses, door joints, furniture joints, Moulding table, foundry tools, Arc welding transformer with cables and holders, Radial Drilling Machine</p>	3025
38.	Fluid Mechanics And Machinery Laboratory / Hydraulic Engineering Lab	<p>Gear pump setup, Kaplan turbine setup, Venturi meter setup, Rotameter setup, Reciprocating pump setup, Pipe Flow analysis setup, Pelton wheel setup, Orifice meter setup, Centrifugal pump / submersible pump setup, Francis turbine setup, Determination of Metacentric height of floating bodies, Bernoullis, minor losses, friction factor in pipes</p>	1296

39.	Dynamics Laboratory	Motorised gyroscope, Whirling of shaft apparatus, Two rotor vibration setup, Turn table apparatus, Transverse vibration setup of cantilever, Torsional Vibration of single rotor system setup, Spring mass vibration system, Kinematic Models to study various mechanisms, Governor apparatus - Watt, Porter, Proell and Hartnell governors, Gear Models, Dynamic balancing machine, Cam follower setup	1198
40.	Metrology and Measurements Laboratory	Torque Measuring Setup, Vernier Height Gauge, Vernier depth Gauge, Vernier Caliper, Autocollimator, Bore gauge, Coordinate measuring machine, Floating Carriage Micrometer, Force Measuring Setup, Gear Tooth Vernier, Mechanical / Electrical / Pneumatic Comparator, Profile Projector / Tool Makers Microscope, Sine Bar, Slip Gauge Set, Surface finish measuring equipment, Telescope gauge, Temperature Measuring Setup	1314
41.	Automation and Metal Forming Laboratory	Experimental two high cold rolling mill, to determine roll separate force, spread, torque for non-ferrous materials, 24V Dc Power Supply, 24V DC Power Supply, Single and Double acting cylinders, Variable speed tensile testing machine - 5T capacity, Water hammer metal forming equipment	720

42.	Thermal Engineering Laboratory	Air-conditioning test rig, 4-stroke Diesel Engine with mechanical loading, 4-stroke Diesel Engine with hydraulic loading, 4-stroke Diesel Engine with electrical loading, Single / two stage reciprocating air compressor, Single cylinder Petrol Engine, Refrigeration test rig, Pin-fin apparatus, Parallel/counter flow heat exchanger apparatus, Natural convection - vertical cylinder apparatus, Multi-cylinder Petrol Engine, Thermal conductivity of insulating powder apparatus, Stefan-Boltzmann apparatus, Steam Boiler with turbine setup, Lagged pipe apparatus, I.C Engine 2 stroke and 4 stroke model, Guarded plate apparatus, Forced convection inside tube apparatus, Emissivity measurement apparatus, Data Acquisition system with any one of the above engines, Composite wall apparatus, Apparatus for Flash and Fire Point	3068
43.	Strength of Materials Laboratory	Vicats apparatus, Beam deflection test apparatus, Compressometer, Dial gauges, Extensometer, Hardness testing machine-Rockwell, Hardness testing machine-Vickers / Brinell, Izod impact testing machine, Le Chateliers apparatus, Mortar cube moulds, Torsion testing machine, UTM of minimum 400 KN capacity	1608

44.	Highway Engineering Laboratory / Construction Materials Laboratory	Flow table, Vibrator, Vee Bee Consistometer, UTM - 400 kN capacity, Trovels and planers, Slump cone, Aggregate impact testing machine, Los - Angeles abrasion testing machine, Concrete Prism moulds, Sieves, Marshall Stability Apparatus, Concrete cylinder moulds & cube moulds, CBR Apparatus, Blains Apparatus, Weighing Balance or scale, Thickness gauge, Tamping rod, Slump cone apparatus, Sieve set, Pycnometer, Oven, Length gauge, IS Sieves 40 mm, 31.5 mm, 25 mm, 20mm, 16mm, 12.5 mm, 10mm, 6.3 mm, Flexure, Compression testing machine, Concrete mixing machine, Compaction factor apparatus, Aggregate Impact Value Apparatus, Aggregate Crushing Value Apparatus, IS sieves 12.5 mm, 10 mm and 2.36 mm, Shallow flat bottom dish, Trowels and Pans, Cylindrical metal measure of 3 litre capacity	954
Workshop Block - First Floor			
45.	Electronics Laboratory / EPL Lab	Function Generators, Necessary digital IC 8, Regulated 3 output Power Supply 5 + 15V, Resistors, Capacitors and inductors, Bread boards, CRO, Semiconductor devices like Diode, Zener Diode, NPN Transistors, JFET, UJT, Photo diode, Photo Transistor, Storage Oscilloscope, ADC and DAC card, Staircase wiring Kit, Household wiring Kit, Fluorescent wiring kit, 500VMegger, Voltmeter, Ammeter, Wattmeter UPF	972

S. No.	Name of the Laboratories	Name of the Equipments	Area in sq. ft.
46.	Control and Instrumentation Laboratory / Basic Electrical, Electronics and Instrumentation Engineering Laboratory	IC Transistor kit, 100gm weights, 2MHz Function Generator, 30 psi Pressure chamber (complete set), AC Synchro transmitter& receiver, Air foot pump (with necessary connecting tubes), Analog - Digital and Digital - Analog converters (ADC and DACs), CRO 30MHz, CRO 30MHZ, Current generator (0- 20mA), DC motor - Generator test set-up for evaluation of motor parameters, Digital multi meters, speed and torque sensors, DSO for capturing transience, Electric heater, Flow measurement Trainer kit (1/2 HP Motor, Water tank, Digital Milliammeter, complete set), Instrumentation Amplifier kit, LVDT20mm core length movable type, Optical sensor, Personal computers with control system simulation packages, PID controller simulation and learner kit, Position Control Systems Kit (with manual), R, L, C Bridge kit (with manual), Single phase Auto transformer, Strain Gauge Kit with Handy lever beam, Tacho Generator Coupling set, Thermistor (silicon type) RTD nickel type, Thermometer, Voltmeter Rheostat Stop watch Connecting wires, Watthour meter (energy meter)	1170



47.	Microprocessors And Microcontrollers Laboratory	8051 Micro Controller Trainer Kit with power supply, 8085 Microprocessor Trainer with Power Supply, 8251 Interface board, 8254 timer counter, 8255 Interface board, 8259 Interface board, 8279 Keyboard / Display Interface board, AC & DC motor with Controller, Traffic Light Control System,	1008
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48.	Microprocessor and Microcontrollers Laboratory	ADC and DAC card, 8051 Micro Controller, Trainer Kit with power supply, 8085 Microprocessor Trainer with Power Supply, 8259 Interface board, 8279 Keyboard / Display Interface board, AC & DC motor with Controller, Traffic Light Control System, 8254 timer counter, 8251 Interface board, 8255 Interface board	966
49.	Research Lab	Solar Power Meter (Irradiance Meter) with orientation and Tilt, FLIR- E4 Thermal Imaging Camera 80x60 pixels, Power Clamp-Meco Ac clamp – on power and Harmonics Tester OHT4545, Tong Tester – Meco – Digital Tong Tester, LCR Meter – Digital Display, NVIS 72 model PCB prototyping machine software support both TINA and Eagle Files, Brushless DC Motor control unit, Personal computers (DELL Optilex i5)	760
50.	Computer Aided Design and Computer Aided Manufacturing Laboratory / Computer Aided Machine Drawing	Software (AUTOCAD, Pro-E, CATIA, UNIGRAPHICS), Standalone desktops, Printer and Plotter, solidworks, Ansys, Mastercam, Nastran	966
51.	Circuits and Devices Laboratory	BC107, BC148, 2N2646, BFW10, Bread Boards, CRO(30MHz), Mixed Signal Oscilloscope (100MHz), Resistors, Capacitors, Inductors- IN4007, Zener diodes, Function Generators(3MHz), Dual Regulated Power Supplies (0 - 30V), DSO (Min 30MHz), Standalone desktops PC, Digital Multimeter, wires, Power transistors, Potentiometer	855

52.	Applied Hydraulics and Pneumatic Laboratory / Robotics Laboratory	Pneumatic trainer kit with FRL unit Double acting cylinder, Double solenoid actuated DCV, DCV with sensor / magnetic reed switches, Hydraulic power pack with pumps and pressure relief valve, Automation Studio, AUTOSIM, software, Limit switches, Linear actuator, PLC, PLC with interface card, Pneumatic training kit with FRL unit, Double acting cylinder, manually actuated DCV, Pneumatic trainer kit with FRL Unit, Single acting cylinder, push button, Flow control valves, Double solenoid actuated DCV, Automation studio software, Single solenoid actuated DCV, Pneumatic trainer kit with FRL unit, Double acting cylinder, Pilot actuated DCV, Rotary actuator, Pressure switch, Pressure relief valve, Pressure reducing valves, Adam's software and matlab software package, Standalone desktops	1313
53.	Linear Integrated Circuits Laboratory / Circuits Design And Simulation Laboratory	BC107,BC148,2N2646,BFW10, Bread Boards, CRO(30MHz), Mixed Signal Oscilloscope (100MHz), Resistors, Capacitors, Inductors- IN4007,Zener diodes, Function Generators(3MHz), Dual Regulated Power Supplies (0 - 30V), DSO (Min 30MHz), Standalone desktops PC, Digital Multimeter, wires, Power transistors, Potentiometer, A/D and D/A convertors, LEDs, IC tester, CRO (Min 30MHz), SPICE Circuit Simulation Software (any public domain or commercial software)	2154
54.	Embedded Laboratory	Embedded trainer kits with ARM board, Embedded trainer kits suitable for wireless communication	855

55.	Communication Systems Laboratory / Analog and Digital Circuits Laboratory	Probes(CRO), CROs, DSO, Kits for Signal Sampling, TDM, AM, FM, PCM, DM and Line Coding Schemes, Error control code, MATLAB / SCILAB or equivalent software package for simulation experiments, Bread Boards, IC Trainer Kit, Computer with HDL software, CRO (30MHz), Multimeter, Resistors, Capacitors, Inductors, Seven segment display, Diodes, Zener diode, Dual power supply/single mode power supply, Dual Regulated Power Supplies (0 - 30V), ICs 7400/ 7402 / 7404 / 7486 / 7408 / 7432 / 7483 / 74150 / 74151 / 74147 / 7445 / 7476/7491/ 555 / 7494 / 7447 / 74180 / 7485 / 7473 / 74138 / 7411 / 7474, Standalone desktop PCs with SPICE software, Transistor / FET (BJT-NPN-PNP and NMOS / PMOS)	2190
56.	Microprocessor and Microcontroller Laboratory	Patch cord, 8086 Microprocessor trainer kit with power supply, 8051 Microcontroller trainer kit, Stepper motor control interfacing compatible with 8086 & 8051kits, Serial and Parallel interfacing card compatible with 8086 & 8051 kits, Printer interfacing card compatible with 8086 & 8051 kits, Keyboard & Display interface board, Digital clock interfacing board, A/D and D/A interfacing card and Traffic light control interfacing card compatible with 8086 & 8051 kits cordsPCs,	848

57.	Optical and Microwave Laboratory	MSO, Microwave test Bench at X band to determine Directional coupler characteristics, Microwave test Bench at X band, Variable attenuator, Detector and 20 MHz Digital / Analog Oscilloscope, Microwave test Bench at X band to determine VSWR for Isolator and Circulator, VSWR meter, Isolator, Circulator, E Plane Tee, H plane Tee, Trainer kit for determining the mode characteristics, losses in optical fiber, Trainer kit for carrying out LED and PIN diode characteristics, Digital multi meter, optical power meter, Trainer kit for analyzing Analog and Digital link performance, 2 Mbps PRBS Data source, 10 MHz signal generator, 20 MHz Digital storage Oscilloscope, PiN PDs with ST / SC / E2000 receptacles 650 / 850 nm, MM/SM Glass and plastic fiber patch chords with ST/SC/E2000 connectors, Kit for measuring Numerical aperture and Attenuation of fiber, Microwave test Bench at X band and Antenna turn table to measure Radiation pattern of Horn antenna, 2 Horn antennas, LEDs with ST / SC / E2000 receptacles 650 / 850 nm, Signal Generator /Function Generators (3 MHz),	84 8
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58.	Electric Circuits Laboratory / Devices Laboratory	Decade Resistance Box, Decade Inductance Box, Decade Capacitance Box (Each), AC/DC – Voltmeters, Ammeters, Circuit Connection Boards Digital Storage Oscilloscope (20 MHz), e-Sim / Scilab / Pspice / Matlab /other Equivalent software Package), Function Generator (1 MHz), Multi-meters, Oscilloscope (20 MHz), PC with Circuit Simulation Software, Printer, Regulated Power Supply: 0 - 15 V D.C, Single Phase Energy Meter, Single Phase Wattmeter, Semiconductor devices like Diode, Zener Diode, NPN Transistors, JFET, and UJT, Voltmeters or multimeters, Tachometers, Switches, Sufficient number of power supply, Galvanometer, Bread board, Multimeter, resistors, Decade Capacitance box, Decade resistance box, Decade Inductance box, CRO, Single Phase Transformer,	870
59.	Measurements and Transducers Laboratory	Strain gauge and Load cell characterization and application, various types of Thermocouple and RTD characterization and application, Thermistor characterization and application, sufficient number of power supply, Galvanometer, Bread board, Multimeter, resistors, Decade sufficient number of capacitance box, Decade resistance box, Decade Inductance box, CRO, Muffle furnace, Measurement of power and energy, Hall effect characterization and application, Measurement of Linear displacement using Potentiometer, Measurement of Angular displacement, LVDT characterization and application	870

60.	Industrial Instrumentation Laboratory / Instrumentation System Design Laboratory	Dead weight tester with pressure gauge, pH meter, Pulse rate trainer, Saybolt Viscometer, tacho meter, Torque trainer, UV Visible spectrophotometer, Vacuum gauge, Orifice plate, ECG trainer, DP transmitter, Conductivity meter, Monolithic Instrumentation amplifier loop analyzer, Linear control valve, ON/OFF control valve, Air regulator, Rotameter, Pump, Storage device, (microcontroller / microprocessor), IC 7805 and resistors, diodes, capacitors, IC 741, CRO, Bread board, signal generator (PID) Microprocessor kit with ADC and DAC section, Flow process station with DP transmitter, Data acquisition card, Bonded strain gauge, Loads, Opamp, Any Process station (Temperature or Level) with corresponding sensors, Thermocouple, RTD, Pump and reservoir pipeline with orifice plate collecting tank, Operational amplifiers	1080
61.	Process Control Laboratory	Flow meter, Control valve trainer (with position for varying P across the valve), Temperature process station with all accessories, Pressure process station with all accessories, Personal computer, MATLAB software, Analog / Digital PID controller, Level process station with all accessories, Flow process station with all accessories	1080

62.	Physics Laboratory	Spectrophotometer, band gap of a semiconductor, Conductivity Meter, Electronic Balance, pH Meter, Potentiometer, thermal conductivity of bad conductor-Lee's Disc, thickness of a thin wire-Air wedge method, Torsion pendulum, velocity of sound and compressibility of liquid-Ultrasonic interferometer, Viscometer, wavelength, and particle size using Laser, angle in an optical fiber, wavelength of mercury spectrum - spectrometer grating, Young's modulus by non-uniform bending method, Home Photometer	1918
63.	Chemistry Laboratory	Conductivity meter, pH meter, Potentiometer, Spectrophotometer, Flame photometer, Oswald viscometer, Weighing balance	1980
Structural Engineering Building			
64.	Advanced Structural Engineering Laboratory	Rebound Hammer, Ultrasonic Pulse Velocity Tester, Vibration Exciter, Clinometer, Demec Gauge, Dial Gauges, Electronic Strain gauges (few) with Measurement System, Hydraulic Jack, Load Cell, Loading Frame, Vibration Meter, FFT Analyser, Proving Ring, Strong Floor	1530
TOTAL			86491