



# COMSATS University Islamabad

## Sahiwal Campus

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## Department of Mechanical Engineering (DME)

Lab No.	Sr. No.	Lab Name	QTY
1.	Applied Physics Lab		
	1.	Micrometer	15
	2.	Vernier calipers	14
	3.	Fly wheel	12
	4.	Compasses	2
	5.	Mechanical balance	4
	6.	Ballistic Galvanometer	2
	7.	Thermocouples	2
	8.	Sextant	2
	9.	Compound pendulum	12
	10.	Compasses scale Apparatus	2
	11.	Barton's Apparatus	2
	12.	Resistance Boxes	14
	13.	Fractional Resistance boxes	10
	14.	Ammeter	7
	15.	Voltmeter	5
	16.	Galvanometer	8
	17.	Rheostate 1000 ohms	2
	18.	Sliding rheostat 1750 ohms	12
	19.	Neon Flash lamp	12
	20.	Newton Rings	2
	21.	Spectrometer	2
	22.	Electromagnetic coil	4
	23.	Hooke's law Apparatus	2
24.	Telescope	2	

	25.	Thermometer	6
2.	<b>Engineering Drawing and Graphics Lab</b>		
	1.	Computer System	55
	2.	CNC 3 Axis Machine	1
3.	<b>Mechanical Workshop</b>		
	1.	Lathe Machine	4
	2.	Milling Machine	2
	3.	Power Hacksaw	1
	4.	Tool Grinder	1
	5.	Shearing Machine	1
	6.	Vertical Pillar Drill Machine	1
	7.	Electric Planer	1
	8.	Jack Planer	1
	9.	Table Vice	15
	10.	Hand Saw	12
	11.	Hammer	4
	12.	Chisel	12
	13.	Rasp File	6
	14.	Smooth File	6
	15.	Pincer	3
	16.	Triangular File	12
	17.	Level	9
	18.	Electric Arc Welding	1
	19.	Tungsten Inert Gas Welding	1
	20.	Gas Welding Equipment	2
	21.	Surface Plate	2
	22.	Drill Machine	1
	23.	Bore gauge	2
	24.	Vernier Test Gauge	2
	25.	Vernier Caliper	1
	26.	Dial Caliper	1
	27.	Micrometer	2
	28.	Hand Hacksaw	2
29.	C Clamp	1	

	30.	Steel Roll	4
	31.	Center Punch	2
	32.	Dot Punch	2
	33.	Ball Pen Hammer	1
	34.	Chisel Set	1
	35.	Triscale	12
	36.	Three Phase Energy Meter (Digital)	2
	37.	Energy Meter	6
	38.	Multimeter	7
	39.	Induction Motor Clutch Type	1
	40.	Induction Motor Clutch Type (Three Phase)	1
	41.	Power Supply (DC)	3
	42.	Digital Multimeter	2
	43.	Bread Board	12
	44.	Megger	2
	45.	Circuit Breaker	4
	46.	Watt Meter	4
	47.	Screwdriver Set	1
	48.	Light Bulb	13
	49.	Wire Stripper	3
	50.	Iron Solder	7
	51.	Connecting Leads	50
	52.	Electric Panel	4
	<b>Mechanisms &amp; Mechanical Vibrations Lab</b>		
4.	1.	Slider crank mechanism Apparatus	2
	2.	Belt Drive Apparatus	1
	3.	Compound wheel and axle Apparatus	1
	4.	Epicyclic train apparatus	1
	5.	Cam and tappet apparatus	2
	6.	Geneva mechanism apparatus	1
	7.	Oscillation cylinder mechanism apparatus	1
	8.	Belt drive mechanism Apparatus	1
	9.	Simple mechanism kit Apparatus	4
	10.	Bevel helical gear Apparatus.	1

	11.	Cam & follower Apparatus	1
	12.	Cylinder crank mechanism Apparatus.	1
	13.	Epicyclic gear Apparatus	1
5.	<b>Thermodynamics, IC Engines and Power Plants Lab</b>		
	1.	Temperature Calibration Apparatus	1
	2.	Expansion of Gases	1
	3.	Pressure calibration Apparatus	1
	4.	Four Stroke Petrol Engine Model	1
	5.	Four Stroke Diesel Engine Model	1
	6.	Air Compressor	1
	7.	Wankel Engine Model	1
	8.	Turbo Jet Engine Model	1
	9.	Nozzle Performance Study System Apparatus	1
	10.	Centrifugal Compressor	1
	11.	Marcent Boiler	1
	12.	Single cylinder steam Engine	1
	13.	Impulse Turbine Apparatus	1
	14.	Reaction Turbine Apparatus	1
	15.	Gear Box with Clutch	1
	16.	Four Stroke Diesel Engine	1
	17.	Four Stroke Petrol Engine	1
	18.	Combustion Laboratory Unit	1
	19.	Fiat Engine 16 Valve 4 Cylinder	1
6.	<b>Mechanics of Materials Lab</b>		
	1.	Universal Testing Machine	1
	2.	Rubber in Shear Apparatus	1
	3.	Extension of Wires Apparatus	1
	4.	Compound Wires Apparatus	1
	5.	Rockwell/Brinell Hardness Tester	1
	6.	Vicker Hardness Tester	1
	7.	Pendulum Impact Tester	1
	8.	Deflection of Beam Apparatus	1
	9.	Extension and Compression of Spring	1

	10.	Combined Shear Force and Bending Moment Apparatus	1
	11.	Apparatus for Testing Torsion and Deflection	1
	12.	Combined Bending & Torsion Apparatus	1
	13.	Continuous Beam Apparatus	1
	14.	Creep Testing Machine	1
	15.	Rotating Fatigue Machine	1
	16.	Thick Cylinder Apparatus	1
	17.	Thin Cylinder Apparatus	1
	18.	Digital Strain Bridge	1
	19.	Strain Gauge Application	1
	20.	Deflection of Flat Plate	1
	21.	Strain Gauge Training System	1
	22.	Polariscope	1
	<b>Instrumentation and Control Lab</b>		
7.	1.	Process Control Trainer	1
	2.	Electrical Machine Trainer	1
	3.	PH value Control Trainer	1
	4.	Transducer and Instrumentation trainer	1
	5.	Vernier Calipers	15
	6.	Profilometer	1
	7.	Bourdon Tube Gauge and Dead Weight Tester	1
	8.	Manometer	1
	9.	Barometer	1
	10.	Lab VIEW	1
	11.	VDAS Versatile Data Acquisition System	1
	12.	PT-100 Sensor	1
	13.	NI USB6009 multifunction DAQ device	1
	14.	PROVA 210- Solar Analyzer	1
	15.	Solar Irradiance Meter	1
	<b>Heat Transfer &amp; HVAC Lab</b>		
8.	1.	Domestic Air Conditioning Trainer	1
	2.	Mechanical Heat Pump	1
	3.	Computer Controlled Air Conditioning Laboratory Unit	1

	4.	Vortex Tube Refrigeration	1
	5.	Computer Controlled Air Conditioning, Refrigeration and Heat Pump Units	1
	6.	Hydraulic Bench	1
	7.	Linear / Radial Heat Transfer Unit	1
	8.	Thermal Conductivity of Liquid and Gases	1
	9.	Laminar / Viscous Flow Heat Transfer Unit	1
	10.	Radiation Heat Exchanger	1
	11.	Free and Force Convection	1
	12.	Boiling Heat Transfer Apparatus	1
	13.	Concentric Tube Heat Exchanger	1
	14.	Cross Flow Heat Exchanger	1
	15.	Flow Boiling Apparatus	1
	<b>Engineering Fluid Mechanics Lab</b>		
9.	1.	Bernoulli's Theorem Apparatus	1
	2.	Flow Meter Measurement	1
	3.	Orifice Discharge	1
	4.	Axial Flow Fan	1
	5.	Impact of Jet	1
	6.	Cavitation Apparatus	1
	7.	Flow Channel Apparatus	1
	8.	Dead Weight Tester	1
	9.	Osborne Reynolds's Apparatus	1
	10.	Francis Turbine	1
	11.	Pelton Turbine	1
	12.	Hydrostatic Pressure	1
	13.	Fluid Friction Measurement	1
	14.	Hydraulic Bench	1
10.	<b>Engineering Mechanics Lab</b>		
	1.	Reaction of beam apparatus	1

	2.	Equilibrium of forces.	1
	3.	Equilibrium on Lever Arm	1
	4.	Toggle joint.	1
	5.	Forces in truss apparatus	1
	6.	Centrifugal Force Apparatus	1
	7.	Work done Apparatus	1
	8.	Acceleration Apparatus	1
	9.	Gyroscope	2
	10.	Rolling disc on inclined plane apparatus	1
	11.	Wheel& differential axis apparatus	1
	12.	Belt Friction Apparatus	1
	13.	Moment of Inertia Apparatus	1
	14.	Constant velocity Joint Apparatus.	2
	15.	Inclined Plane Kit Apparatus	1
	16.	Plate Clutch Friction Apparatus.	1
	17.	Fly Wheel Apparatus	1
	<b>Drawing Hall</b>		
11.	1.	Drawing Tables	25