

Laboratory and Workshop

AVAILABILITY OF INSTRUMENTS IN MECHANICAL DEPARTMENT

MECHANICAL ENGG. LAB

EXPT. NO	AIM OF THE EXPT	INSTRUMENT	AVAILABLE STATUS	WORKING STATUS	QTY
1	Determine end reactions in a beam	BEAM APPARATUS	YES	WORKING MODEL AVAILABLE	1
2	Determination of Young's modulus using Searl's apparatus	SEARL'S APPARATUS	YES	WORKING MODEL AVAILABLE	1
3	Determination of torsional rigidity of the shaft using torsion testing machine	TORSION TESTING MACHINE	YES	WORKING MODEL AVAILABLE	1
4	Determination of salient points (Young's modulus, yield point, fracture point) from stress-strain curve using Universal Testing Machine	UNIVERSAL TESTING MACHINE	YES	WORKING MODEL AVAILABLE	1
5	Determination of hardness number by Rockwell/Vickers hardness testing machine	ROCKWELL HARDNESS TESTING MACHINE	YES	WORKING MODEL AVAILABLE	1
6	Determination of toughness using Impact testing machine (Charpy/Izod)	IMPACT TESTING MACHINE (IZOD/C HARPY)	YES	WORKING MODEL AVAILABLE	1
7	Study of 2-S, 4-S petrol engine	4-S PETROL ENGINE MODEL	YES	MODEL AVAILABLE	1
8	Study of 2-S, 4-S diesel engine	FUEL INJECTOR AND 4-S ENGINE MODEL	YES	MODEL AVAILABLE	1
9	Determination of Flash point and fire point	Flash point and fire point	YES	AVAILABLE	
10	Joule's experiment	Joule's experiment	YES	MODEL AVAILABLE	1
11	Study of boilers (Fire tube, water tube)	WATER TUBE BOILER	YES (WATER TUBE)	MODEL OF WATER TUBE BOILER AVAILABLE	1
12	Study of steam engine	steam engine	YES	AVAILABLE	1

AVAILABILITY OF INSTRUMENTS IN MECHANICAL DEPARTMENT
FLUID MECHANICS AND HYDRAULIC MACHINES LAB

EXPT. NO	AIM OF THE EXPT	INSTRUMENT	AVAILABLE STATUS	WORKING STATUS	QTY
1	Study of pressure measuring devices (manometer, Bourdon tube pressure gauge)	MANOMETER AND BOURDAN TUBE PRESSURE GAUGE	YES	BOURDAN TUBE- NOT WORKING	1
2	Verification of Bernoulli's theorem	BERNOULLI'S APPARATUS	YES	WORKING MODEL AVAILABLE	1
3	Determination of Cd from venturimeter	VENTURIMETER	YES	WORKING MODEL AVAILABLE	1
4	Determination of Cc, Cv, Cd from orifice meter	ORIFICEMETER	YES	WORKING MODEL AVAILABLE	1
5	Study of dissected models of turbines and pumps	RUNNERS OF TURBINES	YES	MODEL AVAILABLE	1
6	Performance test in centrifugal pump	CENTRIFUGAL PUMP	YES	MODEL AVAILABLE	1
7	Performance test in reciprocating pump	RECIPROCATING PUMP	YES	MODEL AVAILABLE	1

AVAILABILITY OF INSTRUMENTS IN MECHANICAL DEPARTMENT
HEAT AND POWER LABORATORY

EXPT. NO	AIM OF THE EXPT	INSTRUMENT	AVAILABLE STATUS	WORKING STATUS	QTY
1	Determine the brake thermal efficiency of single cylinder petrol engine	SINGLE CYLINDER PETROL ENGINE	YES	WORKING MODEL AVAILABLE	1
2	Determine the brake thermal efficiency of single cylinder diesel engine	SINGLE CYLINDER DIESEL ENGINE	YES	WORKING MODEL AVAILABLE	1
3	Determine the B.H.P, I.H.P BSFC of a multi cylinder engine by Morse test	MULTI CYLINDER ENGINE	YES	WORKING MODEL AVAILABLE	1
4	Determine the mechanical efficiency of an air Compressor	Air Compressor	YES	WORKING MODEL AVAILABLE	1
5	Study the Construction features of Domestic refrigerator.	CIRCUIT OF DOMESTIC REFRIGERATOR	YES	MODEL AVAILABLE	1
6	Study the Construction features of Water cooler	WATER COOLER	YES	MODEL AVAILABLE	1

7	Study the Construction features of Window A.C	WINDOWS AC FROM AC TUTOR	YES	MODEL AVAILABLE	1
8	Study the Construction features of Split A.C	Air Conditioner	YES	WORKING MODEL	1
9	Determine the COP of a refrigerating tutor	REFRIGERATING TUTOR	YES	AVAILABLE AVAILABLE	1
10	Determine the COP of an A.C tutor.	AC TUTOR	YES	WORKING MODEL AVAILABLE	1

AVAILABILITY OF INSTRUMENTS IN MECHANICAL DEPARTMENT
THEORY OF MACHINES AND MEASUREMENTS LAB

EXPT. NO	AIM OF THE EXPT	INSTRUMENT	AVAILABLE STATUS	WORKING STATUS	QTY
1	Determination of centrifugal force of a governor (Hartnell / Watt/Porter).	GOVERNER	YES	MODEL AVAILABLE	1
2	Study & demonstration of static balancing apparatus.	STATIC BALANCING APPARATUS	YES	MODEL AVAILABLE	1
3	Study & demonstration of journal bearing apparatus.	JOURNAL BEARING APPARATUS	YES	MODEL AVAILABLE	1
4	Study of different types of Cam and followers.	CAM AND FOLLOWER	YES	MODEL AVAILABLE	1
5	Study & demonstration of epicyclic gear train.	EPICYCLIC GEAR TRAIN	YES	MODEL AVAILABLE	1
6	Determination of the thickness of ground M.S flat to an accuracy of 0.02mm using Vernier Calliper.	VERNIER CALIPER	YES	INSTRUMENT AVAILABLE	10
7	Determination of diameter of a cylindrical component to an accuracy of 0.01mm using Micrometer.	MICROMETER	YES	INSTRUMENT AVAILABLE	10
8	Determine the heights of gauge blocks or parallel bars to accuracy of 0.02mm using Vernier height gauge.	VERNIER HEIGHT GAUGE	YES	INSTRUMENT AVAILABLE	1
9	Determine the thickness of ground MS plates using slip gauges.	SLIP GAUGE	YES	INSTRUMENT AVAILABLE	1
10	Determination of angel of Machined surfaces of components using sin bar with slip gauges.	SINE BAR	YES	INSTRUMENT AVAILABLE	1

AVAILABILITY OF INSTRUMENTS IN MECHANICAL DEPARTMENT
AUTOMOBILE ENGG LAB

EXPT. NO	AIM OF THE EXPT	INSTRUMENT	AVAILABLE STATUS	WORKING STATUS	QTY
1	Study of Automobile chassis.	CAR CHASSIS	YES	MODEL AVAILABLE	1
2	Study the differential mechanism of an automobile.	DIFFERENTIAL	YES	MODEL AVAILABLE	1
3	Study the electrical system of automobile.	ELECTRICAL SYSTEM OF AUTOMOBILE	YES	MODEL AVAILABLE	1
4	Study of braking system (Hydraulic /Air brake).	HYDRAULIC AND AIR BRAKE	YES	MODEL AVAILABLE	1
5	Study of multiple Clutch of automobile	CLUTCH	YES	MODEL AVAILABLE	1
6	Study and demonstration of different circuit of carburettor.	SOLEX CARBURRETOR	YES	MODEL AVAILABLE	1
7	Checking the spark plug and setting the port and check the ignition in the spark plug.	SPARK PLUG	YES	WORKING MODEL AVAILABLE	1
8	Study the assembly of car engine.	CAR ENGINE	YES	MODEL AVAILABLE	1
9	Calibration of Bourdon's tube Pressure gauge.	BOURDAN TUBE PRESSURE GAUGE	yes	WORKING MODEL AVAILABLE	1

ELECTRONICS AND TELECOMMUNICATION ENGINEERING
LIST OF LABORATORY INSTRUMENTS

SL NO	NAME OF THE LABORATORY	NAME AND SPECIFICATION OF THE EQUIPMENT	PRESENT WORKING CONDITION
1	DIGITAL ELECTRONICS	1. Half and Full adder	yes
		2. Half and full subtractor	yes
		3. 4-Bit binary / grey code converter	yes
		4. 1-Bit digital comparator	yes
		5. MUX/ DEMUX trainer	yes
		6. 4-bit UP/DOWN Counter	yes
		7. 8-bit D/A And A/D converter	yes
		8. Digital trainer kit	yes
		9. Flip Flop	yes
		10. 7-segment display	yes
2	EMMI LAB	1. CRO and FG	yes
		2. Wheatstone bridge	yes
		3. Maxwell bridge	yes
		4. LDR & VDR Characteristics	yes
		5. Schering bridge	yes
		5. LCR meter	yes
		6. LVDT trainer	yes
		7. RTD trainer	yes
		8. temperature using thermistor	yes
		1. BJT and JFET configuration trainer	yes

3	AEC LAB	2.Rc coupled amplifier trainer	yes
		3.Power amplifier(A, B, C) trainer	yes
		4.Push pull amplifier trainer	yes
		5.Oscillator trainer	yes
		6.Multivibrator trainer(IC 555)	yes
		7.Rectifier trainer	yes
		8.Zener diode characteristics trainer	yes
		9.Transistor biasing trainer	yes
		10. Zener diode regulator trainer	yes
		11.BJTCE Amplifier	yes
		12.BJT Emitter Follower	yes
		4	POWER ELECTRONICS LAB
2.DIAC and TRIAC trainer	yes		
3.UPS trainer	yes		
4.Switch mode regulator trainer	yes		
5.IGBT trainer	yes		
6.Series inverter trainer kit	yes		
7.Power Electronics Trainer	yes		
8.Discrete Components Trainer	yes		
5	CE LAB	1.ASK modulator kit	yes
		2.PSK modulator kit	yes
		3.PCM transmitter	yes
		4.FM modulation / demodulation	yes
		5.Fibre optics	yes
		6. Mobile phone handset trainer	yes
		7.Microwave Test Bench	yes
6	MPMC LAB	1.8085 kit	yes
		2.ADC / DAC interfacing trainer	yes
		3.Stepper motor control trainer	yes
		4.Study of Micro Controller Trainer	yes
		4.FPGA Proto Board Trainer	yes

ELECTRICAL ENGINEERING
LIST OF LABORATORY INSTRUMENTS

SL NO	NAME OF THE LABORATORY	NAME AND SPECIFICATION OF THE EQUIPMENT	PRESENT WORKING CONDITION
1	BASIC LAB	1. Earth Tester	yes
		2. Portable Ammeter	yes
		3. Portable voltmeter	yes
		4. Portable wattmeter	yes
		5. Portable power factor meter	yes
		6. single phase energy meter	yes
		7. capacitive load box	yes
		8. Inductive load box	yes
		9. resistive load box	yes
		10. Digital power factor meter	yes
		11. Rheostat	yes
2	CNT LAB	1. Superposition Theorem Kit	yes
		2. Thevenin's theorem	yes
		3. Norton's theorem	yes
		4. Millman's theorem	yes
		5. Maximum power theorem	yes
		6. RLC kit	yes
		7. Active power filter kit	yes
		8. BH curve	yes
		9. CRO	yes
		10. Function generator	yes
3	MACHINE LAB	1. DOL starter (1- ϕ and 3- ϕ)	yes
		2. Star delta starter	yes
		3. Auto transformer starter	yes
		4. Rotor resistance starter	yes
		5. 1- ϕ and 3- ϕ transformer	yes
		6. 1- ϕ alternator	yes
		7. 3- ϕ energymeter	yes
		8. 3- ϕ induction motor	yes
		9. DC motor	yes
		10. DC generator	yes
		11. 3- ϕ variac	yes
		12. Meggar	yes
		13. HPMV lamp	yes
		14. Cell tester	yes
		15. AC/DC panel	yes
		16. Tachometer	yes
		17. Crimping tool	yes
		18. Digital panel meter	yes
		19. Synchronous Motor	yes