

RAMACHANDRA COLLEGE OF ENGINEERING, ELURU, W.G. (Dist.)
DEPARTMENT OF MECHANICAL ENGINEERING

ENGINEERING WORKSHOP LAB

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	12" Rough Flat File
2.	12" Smooth Flat File
3.	12" Half round Rough File
4.	12" Half round Smooth File
5.	Square Smooth File
6.	Square Rough File
7.	Triangular File
8.	Knife Edge File
9.	Round Rough File
10.	Round Smooth File
11.	Wood rough File
12.	Bench Vices
13.	Carpentry vices
14.	1 lb Hammer
15.	Hammers
16.	10" Try Square
17.	Steel Rule
18.	18" Handsaw
19.	12" Handsaw
20.	Fitting Chisels
21.	Carpentry 2" Chisels
22.	Carpentry 1" Chisels
23.	Mortise Chisel

24.	Dot Punch
25.	Jack planes
26.	Hand Files
27.	Cutting Pliers
28.	Screw Drivers
29.	Scribers
30.	Testers
31.	Wires Stippers
32.	Wooden Mallets
33.	Log Stone
34.	Badiselu(Carpentry)
35.	Hack Saw Frames
36.	Jimny Calipers
37.	Oil Can
38.	Marking Gauge (Fitting)
39.	Marking Gauge(Carpentry)
40.	Hand Drilling Machine

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FLUID MECHANICS & HYDRAULIC MACHINERY LAB (FMHM)

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	Impact of Jet on Vanes with accessories
2.	Pelton Turbine Testing with standard accessories
3.	Francis Turbine Testing with standard accessories
4.	Centrifugal Pump Testing with standard accessories
5.	Multistage Centrifugal Pump Turbine Testing with standard accessories
6.	Reciprocating Pump Testing with standard accessories
7.	Calibration of Venturi meter
8.	Calibration of Orifice Meter
9.	Pipe Friction Apparatus
10.	Minor Losses apparatus
11.	Kaplan Turbine
12.	Turbine flowmeter

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MECHANICS OF SOLIDS LAB(MOS)

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1	Universal Testing Machine with accessories
2	Torsion Testing Machine
3	Pendulum Impact Tester
4	Rockwell Hardness Tester with accessories
5	Brinell Hardness Tester
6	Spring Testing Machine
7	Punch shear Test

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METALLURGY & MATERIALS SCIENCE LAB.

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	Monocular Metallurgical Microscope
2.	Binocular Metallurgical Microscope
3.	Trinocular Metallurgical Microscope
4.	Colour Image Capture System
5.	Dual Disc Polisher
6.	Hydraulic Specimen Mounting Press
7.	Belt Grinder
8.	Muffle Furnce
9.	Jominey End Quench Machine

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PRODUCTION TECHNOLOGY LAB (PT)

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	Spot welding m/c.
2.	Hydraulic Press
3.	Die for Hydraulic Press
4.	Fly Press
5.	Fly Press Die
6.	Blow Moulding Machine
7.	Blow Moulding Machine Die
8.	Injection Moulding Machine
9.	Injection Moulding Die
10.	Sand Rammer
11.	Mould Hardness Tester
12.	Shear Strength Attachment
13.	Permeability Tester
14.	Universal Strength Machine

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THERMAL ENGINEERING LAB

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	Four Stroke single cylinder water cooled 5HP 1500 rpm vertical Diesel engine With mechanical (rope brake) dynamometer
2.	Two stroke single cylinder 2.5HP 2800 rpm air cooled Petrol engine
3.	Morse Test - Multi Cylinder Four Stroke 3 Cylinder Petrol Engine Test Rig
4.	Variable Compression Ratio Petrol Engine Test Rig with 2.2kw DC Generator, Resistance Load Bank,
5.	Reciprocating Air Compressor 2stage 2HP Test Rig with "Bakgiam" make Compressor
6.	Valve Timing Diagram of an I.C.Engine -Cut section of Four Stroke, Single Cylinder Diesel Engine
7.	Port Timing Diagram of an I.C.Engine- Cut section of Two Stroke, Single Cylinder Petrol Engine
8.	Bobcok & Wilcox Boiler
9.	Cochran Boiler
10.	Lancashire Boiler

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METROLOGY LAB (MET)

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	Vernier Caliper 02-150mm Make Ocean
2.	Vernier Height gauge 0-300 mm make Ocean
3.	Vernier depth gauge size
4.	Gear tooth vernier caliper make ocean
5.	Dial vernier caliper size 0-160mm Make Mitutoyo
6.	Out side micro meter range 0-25mm Make Ocean
7.	Out side micro meter range 25-50mm make Ocean
8.	In side micro meter size 5-30mm Make Ocean
9.	Gear tooth micro meter size 0-25mm Make Ocean
10.	Depth micro meter size 0-100 mm Make Ocean
11.	Dial bore gauge 35-60mm Make Ocean
12.	Dial indicators 5 nos range 10mm Make
13.	Universal dial indicator Make Ocean
14.	Dial Test indicator with magnetic stand
15.	Slip gauges set M87(87pcs/set) Make Ocean
16.	Feeler gauge 20 blades 0.05-1mm, 100mmLong, Make Mitutoyo
17.	Screw pitch gauge mm/inch combine set Make Ocean
18.	Bevel protractor 135mm 187-201 Make Ocean
19.	Sprit level size 200mm, L.C:0.02mm/meter Make Ocean
20.	Sine bar size 200mm make Indian
21.	Steel V-Block 2nos
22.	C- I Angle plate size 250x200x150 mm Ocean Make
23.	Thread pitch micro meter range 0-25mm
24.	Dial indicator stand DGS-2
25.	Sur face plates size 300X300 mm

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INSTRUMENTATION LAB (IST)

S. No.	Name of the Equipment
1.	Calibration of Pressure Gauge/Pressure Transducer
2.	Calibration of Transducer for Temperature
3.	Study & Calibration of LVDT Transducer for Displacement Measurement
4.	Strain Measuring System
5.	Calibration of Thermocouple for temperature measurement
6.	Calibration of Capacitance Transducer for Angular Displacement
7.	Study & Calibration of Photo & Magnetic speed pickups for measurement of speed
8.	Rotameter Test Rig (Closed circuit)
9.	Vibration - Study & use of seismic pick up for the measurement of vibration

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HEAT TRANSFER LAB (HT)

S. No.	Name of the Equipment
1.	Heat Transfer through Composite Walls Apparatus
2.	Heat Transfer through Lagged Pipe Apparatus
3.	Thermal Conductivity of Insulating Powder
4.	Thermal Conductivity of Metal Bar
5.	Heat Transfer from Pin-Fin Apparatus
6.	Heat Transfer in Forced Convection
7.	Heat transfer through Natural Convection
8.	Parallel Flow Counter Flow Heat Exchanger
9.	Emissivity Measurement Apparatus
10.	Stefan Boltzman Apparatus
11.	Condensation in Drop wise Film wise forms
12.	Critical Heat Flux Apparatus

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THEORY OF MACHINES LAB

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	Static & Dynamic Balancing Apparatus
2.	Motorized Gyroscope
3.	Universal Vibration Apparatus
4.	Wear testing Apparatus (Pin on Disc)
5.	Dynamic Balancing Machine, (horizontal type)
6.	Whirling speed of a shaft
7.	Governor Apparatus
8.	Fly wheel & axle system
9.	Cam Follower system
10.	Mechanisms
11.	Belt and Pulley Apparatus
12.	Study of Gears

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MACHINE TOOLS LAB (MT)

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	MASTER LATHE
2.	1HP/3PHASE ELECTRIC MOTOR & REV-FOR SWITCH
3.	160MM X3 JAWS TRUE CHUCK
4.	CHUCK PLATE
5.	TAPER TURNING ATTACHMENT
6.	"BANKA" GUJARAT MAKE LATHE
7.	165MM TRUE CHUCK
8.	200MM DOG CHUCK
9.	MASTER" RADIAL DRILLING -25 MM
10.	½" CAP. DRILL CHUCK, ARBOR & SLEEVE
11.	DRILL MACHINE VICE
12.	GUJARAT MAKE UNI./HORIZONTAL MILLING
13.	VERTICAL ATTACHMENT
14.	DIVIDING HEAD 4 1/2" (FOR SM-1)
15.	ROTARY MILLING TABLE
16.	SWIVEL BASE VICE
17.	COOLANT PUMP WITH FITTINGS
18.	SHAPING MACHINE
19.	SURFACE GRINDER

20.	MOTORISED COOLANT PUMP WITH TANK&FITTINGS
21.	WHEEL BALANCING STAND
22.	MAGNETIC CHUCK 12" X 6"
23.	GUJARAT MAKE SLOTTING MACHINE
24.	HYDRAULIC HACKSAW MACHINE

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SIMULATION LAB (SM)

LIST OF EQUIPMENTS

S. No.	Name of the Equipment
1.	CNC SLANT BED MILL
2.	CNC SLANT BED LATHE
3.	COMPUTERS
4.	AIR COMPRESSOR
5.	SERVO STABILIZER
6.	PC UPS SRC 6000 UXI (INCLUDING 48 BATTERIES)
7.	CNC TRAIN OFFLINE SIMULATION SOFTWARE-10 USERS
8.	CREO ACADEMIC TEACHING VERSION WITH 50 USERS NETWORK LICENSE (PERPETUAL)
9.	ANSYS CFD -25 USERS