

# MECHANICAL DEPARTMENT LABS

## WORKSHOP

### MACHINE SHOP

S.NO	EQUIPMENT	QUANTITY
1	LATHE MACHINE(4.5 FEET)	4
2	SHAPER MACHINE	1
3	SLOTTER MACHINE	2
4	SHAPER VICE	1
5	SURFACE GRINDER	1
6	RADIAL DRILL MACHINE	1
7	STANDING LATHE MACHINE	1
8	L' KEYS SET	2
9	BENCH GRINDER	2
10	DRILL	10
11	DRILL SLEEVE	6
12	DAIL ANGLE	1
13	FLAT( 2 CUT FILE)	5
14	GREESE CAN	1
15	HSS TOOL BIT (3/8 SIZE)	2
16	INSIDE CALIPER 6"	2
17	MICROMETER	2
18	STEEL RULE	2
19	OPEN END SPANER (MM)	1
20	OUTSIDE SPANER(MM)	6
21	OIL CAN	3
22	PAINTING BRUSH	4
23	RADIUS GAUGE	1
24	REAMER	1

25	SPRING DIVIDER	5
26	VERNIER CALIPAR(LOCAL)	8
27	POWER HACKSAW	1

## CARPENTRY SHOP

S.NO	EQUIPMENT	QUANTITY
1	CARPENTRY VICE	8
2	CLAW HAMMER	2
3	CROSS PIN HAMMER	2
4	HALF ROUND FILE( RASP FILE)	3
5	RIP SAW	14
6	HAND DRILL(WHEEL BASE)	1
7	IRON JACK PLANE 9"	10
8	MARKING GAUGE	4
9	STEEL RULE12"	4
10	PINCER	4
11	LAPPING STONE	1
12	FOUR FOLD RULE	1
13	SCREW DRIVER	2
14	TRI SQUARE 6"	3
15	TRAIANGULAR FILE 6"	6
16	WOOD WORKING MACHINE	1
17	WORK BENCH (WOOD)	2
18	KEY HOLE SAW	1
19	MORTISE CHISEL ½ "	5
20	FIRMER CHISEL ½ "	15
21	FIRMER CHISEL 1"	2
22	MORTISE CHISEL ¾ "	4
23	MAQLLET (PLASTIC)	2
24	DRILLING MACHINE (BENCH)	1
25	INCHEE TAPE	2





## FOUNDRY SHOP

**INCH. OF LAB:-**

**AREA OF LAB:-100 Sq. m**

<b>S.No</b>	<b>EQUIPMENT NAME</b>	<b>QUANTITY</b>
1	DRAW SPIKE	2
2	FLAT RAMMER	4
3	HAND RIDDLE	1
4	HURT AND SQUARE SLIK	4
5	LIFTER	6
6	MOLLASES	250KG
7	MOULDING BOX	4
8	RAMMER(SIDE)	2
9	ROUND RAMMER	2
10	SHOWEL	1
11	STRIKE OF BAR	4
12	SPRUE PIN	4
13	TROWEL	2
14	VENT WIRE	4
15	SAND	1 TROLLY

## FITTING SHOP

S.NO	EQUIPMENT	QUANTITY
1	MEASURING STEEL RULE	5
2	FLAT BUSTED FILE 12"	10
3	FLAT SMOOTH FILE 8"	5
4	FLAT SECOND CUT FILE 10"	10
5	HALF ROUND FILE 10"	3
6	HALF ROUND FILE 6"	4
7	KNIFE EDGE FILE 6"	4
8	TRI SQUARE 6"	6
9	HAND HACKSAW FRAME 12"	12
10	HAMMER ONE POUND	2
11	ANGEL PLATE 6"	1
12	JENNY CALIPER 6"	6
13	TAP HANDLEB	4
14	DIE HANDLE	3
15	PIUPE RENCH 12"	1
16	COMBINATION SET	1
17	VERNIER HEIGHT GAUGE	1
18	BALL PIN HAMMER 200gm	1
19	LETTER PUNCH	1
20	SCRAPER	2
21	CHISEL	4
22	TRIANGULAR FILE	2
23	SCREW DRIVER	2
24	PARLLEL JOB BENCH VICE	8
25	HAND TOP SET 4mm	1
	HAND TOP SET 8mm	1
	HAND TOP SET 10mm	1
	HAND TOP SET 12mm	1
	HAND TOP SET 5/12 "	1

	HAND TOP SET 3/8"	1
	HAND TOP SET 5/16"	2
	HAND TOP SET 1/4"	2
	HAND TOP SET 1/2"	2
26	MS FLAT 50*10 MM	4 LENGTH
27	DRILL MACHINE 3/4"	1
28	HSS DRILL BIT 1/4"	2
	HSS DRILL BIT 3/8"	2
	HSS DRILL BIT 5/16"	2
	HSS DRILL BIT 7/16"	2
	HSS DRILL BIT 1/2"	2
	HSS DRILL BIT 1/6"	2
	HSS DRILL BIT TAPER SHANK 1/2"	1
	HSS DRILL BIT TAPER SHANK 3/8"	1
29	SURFACE PLATE 300*300 MM	1

## **BASIC OF MECHANICAL ENGG. LAB**

**INCHARGE OF LAB: MR. PAWAM KUMAR**

**AREA OF LAB: 100 Sq. m**

<b>S.NO</b>	<b>EQUIPMENT</b>	<b>QUANTITY</b>
1	WORM AND WORM WHEEL SINGLE STAR	1
2	WORM AND WORM WHEEL DOUBLE STAR	1
3	WORM AND WORM WHEEL TRIPLE STAR	1
4	SINGLE PURCHASE WINCH CRAB	1
5	DOUBLE PURCHASE WINCH CRAB	1
6	SIMPLE SCREW JACK	1
7	COMPOUND SCREW JACK	1
8	BENDING MOMENT APPARATUS	1
9	SHEAR FORCE APPARATUS	1
10	SIMPLE JOB CRANE	1
11	2 STROKE PETROL ENGINE	1
12	2 STROKE DIESEL ENGINE	1
13	4 STROKE PETROL ENGINE	1
14	4 STROKE DIESEL ENGINE	1
15	BABCOCK AND WILCOX BOILER MODEL	1
16	COCHERN BOILER MODEL	1
17	PRESSURE GAUGE	1
18	DEAD WEIGHT SAFETY VALVE	1
19	LEVER SAFETY VALVE	1
20	SPRING LOADED SAFETY VALVE	1
21	HIGH STEAM LOW WATER SAFETY VALVE	1
22	BLOW OFF COCK	1
23	3 TYPES OF FUSIBLE PLUG	1
24	FEED CHECK VALVE	1
25	WATER GAUGE	1
26	STEAM STOP VALVE	1
27	STEAM INJECTOR	1
28	MODEL OF PELTON WHEEL	1
29	MODEL OF FRANCIS TURBINE	1

## FLUID MECHANICS LAB

**NAME OF INCHARGE: ER. VINOD**

**AREA OF LAB: 200 SQ. M**

SNO.	EQUIPMENT NAME	QUANTITY
1	IMPACT OF JET APPARATUS	1
2	ORIFICEMETER APPARATUS	1
3	VENTURIMETER APPARATUS	1
4	V NOTCH & rectangular NOTCH APPARATUS	1
5	BERNOLLI THEORM APPARATUS	1
6	META CENRE HEIGHT APPARATUS	1
7	ORIFICE APPARATUS	1
8	APPARATUS FOR DETERMINING MINOR LOSSES IN PIPE & FITTINGS	1

## REFRIGERATION AND AIR -CONDITIONING LAB

**NAME OF INCHARGE: ER. NARENDER KUMAR**

**AREA OF LAB:100 SQ. M**

SNO.	EQUIPMENT NAME	QUANTITY
1	VAPOR COMPRESSION REFRIGERATION TRAINER	1
2	MECHANICAL HEAT PUMP TEST RIG	1
3	WATER COOLER TEST RIG	1
4	ICE PLANT TRAINER	1
5	AIR CONDITIONING TEST RIG(WINDOW TYPE)	1
6	WATER CHILLING PLANT TEST RIG	1

## KINENATICS OF MACHINE LAB

**NAME OF INCHARGE: ER. VIKAS SHARMA**

**AREA OF LAB:100 SQ. M**

<b>SNO.</b>	<b>EQUIPMENT NAME</b>	<b>QUANTITY</b>
1	CRANK AND CONNECTING ROD MODEL	1
2	FOUR BAR LINK MODEL	1
3	MODEL OF KINEMATIC PAIR	1
4	MODEL OF PANTOGRAPH	1
5	MODEL OF WHIT WORTH QUICK RETURN MECHANISM	1
6	MODEL OF CRANK SHAFT TO SLIDER MECHANISM	1
7	MODEL OF INVERSION OF FOUR BAR MECHANISM	1
8	MODEL OF OSCILATING CYLINDER MECHANISM	1
9	MODEL OF MODEL OF CAM AND FOLLOWER	1
10	MODEL OF DOUBLE STAGE HELICAL	1
11	MODEL OF BEVEL GEAR	1
12	MODEL OF THREE STAGE GEAR TRAIN	1
13	MODEL OF REVERTED GEAR TRAIN	1
14	MODEL OF OLDDHAM COUPLING	1
15	MODEL OF SLIDER CRANK MECHANISM	1
16	MODEL OF SINGLE STAGE HELICAL GEAR	1
17	MODEL OF DIFFERENTIAL GEAR BOX	1
18	MODEL OF SIMPLE GEAR TRAIN WITH INTERMEDIATE GEAR	1
19	MODEL OF SIMPLE GEAR TRAIN WITH INTERMEDIATE GEAR	1
20	CAM ANALYSIS APPRATUS	1
21	APPRATUS FOR GEAR TOOTH PROFILE GENERATOR	1
22	EPICLIC GEAR TRAIN	1
23	BELT AND PULLY DRIVE	1

## **Internal Combustion Engine Lab**

**NAME OF INCHARGE: ER. KAPIL PAMCHAL**

**AREA OF LAB:100 SQ. M**

S.NO.	Equipment Name	Quantity
1	4- STROKE SINGLE CYLINDER DIESEL ENGINE TEST RIG.	1
2	2- STROKE SINGLE CYLINDER PETROL ENGINE TEST RIG.	1
3	4- STROKE 4- CYLINDER DIESEL PETROL TEST RIG.	1
4	COMPRESSOR WITH MOTER	1

## **Measurement & Instumentation lab**

**NAME OF INCHARGE: ER. PARDEEP KUMAR**

**AREA OF LAB:100 SQ. M**

S.NO.	Equipment Name	Quantity
1	DEAD WEIGHT PRESSURE GAUGE TESTER	1
2	TO STUDY L.V.D.T. USING SMALL DISPLACEMENT	1
3	LOAD MEASUREMENT TUTOR APPRATUS	1
4	TORQUE MEASUREMENT TUTOR APPRATUS	1
5	APPRATUS TO MEASURE SPEED OF SHAFT OF A SHAFT BY A NON CONTACT TYPE	1
6	STARIN GAUGE BASDED CAN FILEVES	1
7	MEASUREMENT OF STATIC AND DYNAMIC PRESSURE BY PRESSURE TRANSDUCER	1
8	TEMPERATURE MEASUREMENT THERMOCOUPLE	1
9	TEMP. MEASUREMENT BY R.T.D.	1

## **DYNAMICS OF MACHINE LAB**

**NAME OF INCHARGE: ER. VIKAS SHARMA**

**AREA OF LAB:100 SQ. M**

S.NO.	Equipment Name	Quantity
1	Motorized governor apparatus	1
2	Bicycle wheel gyroscope	1
3	Static dynamic balancing apparatus	1
4	Motorized gyroscope	1

## **AUTOMOBILE ENGG. LAB**

**NAME OF INCHARGE: ER. RAKESH RAJPAL**

**AREA OF LAB:100 SQ. M**

S.NO.	Equipment Name	Quantity
1	Cut section of four stroke, four cylinder diesel engine	1
2	Cut section model of four stroke, four cylinder petrol engine	1
3	Cut section assembly of suspension system	1
4	Dynamic cut section automobile chassis jeep 4*4	1
5	Model of fuel supply system for diesel engine	1
6	Model of fuel supply system for petrol engine	1
7	Working model of electronic ignition system	1

## HEAT TRANSFER LAB

NAME OF INCHARGE: ER. PAWAN KUMAR

AREA OF LAB:100 SQ. M

S.No.	Equipment Name	Quantity
1	Heat Transfer through composit wall	1
2	Thermal conductivity of powder	1
3	Thermal conductivity of liquid	1
4	Thermal conductivity of metal bar	1
5	Emissivity measurement apparatus	1
6	Heat pipe Demonstrations	1
7	Heat transfer through a pin fin	1
8	Heat transfer in a forced convection	1
9	Parallel flow/counter flow heat exchanger	1

## FLUID MACHINES LAB

NAME OF INCHARGE: ER. VINOD KUMAR

AREA OF LAB:100 SQ. M

S NO.	Equipment name	Quantity
1	Centrifugal pump test rig	1
2	Reciprocating test rig	1
3	Gear oil pump test rig	1
4	Hydraulic ram test rig	1
5	Pelton wheel test rig	1
6	Francis turbine test rig	1
7	Kaplan turbine test rig	1
8	Tacho meter	1

# STRENGTH OF MATERIAL LAB

**NAME OF INCHARGE: ER. NEERAJ GROVER**  
**AREA OF LAB:100 SQ. M**

S NO.	Equipement name	Quantity
1	Universal testing machine capacity 20 KN	1
2	Rock well curn-Brinall hardness tester capacity 250KG	1
3	Impact testing machine conducting Charpy and Izod impact test	1