

WORKSHOP PRACTICE - I

LESSON PLAN

WELDING SHOP-I

Name of Faculty : Sh. JAIKANWAR, W/I

Discipline : AUTOMOBILE,MECHANICAL,CHEMICAL, I&C

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in welding Shop. Practice of striking arc (Minimum 4 continuous beads on 100 mm long M.S. flat).
			2	Practice of depositing beads on plate at different current levels. (Minimum 4 beads on M.S. plate at four setting of current level and differentiating their characteristics).
2			1	Preparation of lap joint using arc welding process. Preparation of butt joint using arc welding process. (100 mm long).
			2	Preparation of T Joint using arc welding (100mm x 6 mm M.S. Flat).

All Branch Students of Ist Sem are divided into Seven Groups and the syllabus is repeated in each Shop after Two weeks for the next Group

FITTING SHOP-I

Name of Faculty : Sh. VIRENDER KUMAR W/I

Discipline : AUTOMOBILE,MECHANICAL,CHEMICAL, I&C

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Fitting Shop.
			2	Marking of job, use of marking tools and various types of files, use of tri square, surface plate, filing and use of measuring instruments. (zero error and least count of Vernier calliper, Micrometer and Vernier height gauge).
2			1	Filing a rectangular/square piece to maintain dimensions within an accuracy of ± 0.5 mm.
			2	Making a cut-out from a square piece of MS flat using hand hacksaw and chipping

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SHEET METAL SHOP-I

Name of Faculty : Sh. BALWAN SINGH, W/I

Discipline : ALL BRANCHES

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory Assignments	Practical Day	Practicals Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Sheet Metal Shop. Shearing practice on a sheet using hand shears.
			2	Prepare a seam joint of G.I. Sheet
2			1	Practice on making Single(/double) riveted lap joint/Butt Joint.
			2	Development of sheet for preparation of cubical container(300x150x25 mm)

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ELECTRIC SHOP-I

Name of Faculty : Sh. VIPIN KUMAR W/I

Discipline : AUTOMOBILE,MECHANICAL,CHEMICAL, I&C

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Electric Shop. Identification of phase, Neutral and Earth wires for connection to domestic electrical appliances and their connections to three pin plugs. Difference between series and parallel wiring.
			2	Carrying out house wiring circuits using fuse, switches, sockets, ceiling rose etc. in batten or P.V.C. casing-caping. Demo of conduit wiring through junctions To prepare a three level Godown wiring circuit with PVC conduit wiring system.
2			1	Installation of battery and connecting two or three batteries in series and parallel and its effect. Charging a battery and testing with hydrometer and cell tester
			2	Installation of Solar cells, costing according to capacity

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CARPENTARY SHOP-I

Name of Faculty : Sh. SATISH KUMAR W/I

Discipline : AUTOMOBILE,MECHANICAL,CHEMICAL, I&C

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Carpentary Shop. Marking, sawing, planning to size , chiselling and their practice
			2	Half Lap Joint (cross, L or T – any one)
2			1	Mortise and Tenon joint (T-Joint)
			2	Dove tail Joint (Half lap dovetail joint or Bridle Joint)

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SMITHY SHOP-I

Name of Faculty : Sh. Radhey Shyam

Discipline : AUTOMOBILE,MECHANICAL,CHEMICAL, I&C

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Smithy Shop.
			2	Making a cold / hot, hexagonal flat chisel including tempering of edges
2			1	Production of utility goods e.g. hexagonal bolt / square shank boring tool, fan hook (long S-type) [Two jobs are to be done by the students].
			2	To prepare a cube from a M.S. round by forging method.

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PAINTING SHOP-I

Name of Faculty : Dr. Anand Parkash Dahiya
Discipline : AUTOMOBILE,MECHANICAL,CHEMICAL, I&C
Semester : Ist
Subject : Workshop Practice I
Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Painting Shop. Preparation of surface before painting such as cleaning, sanding, applying putty, filling procedure and application of primer coat and painting steel item.
			2	Painting practice by brush on MS sheet Practice of dip painting
2			1	Practice of lettering: name plates / sign board Polishing and painting on wooden and metallic surfaces(furniture or utility of Polytechnic)
			2	Practical demonstration of powder coating. Practical demonstration of spray painting on a utility object

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WORKSHOP PRACTICE - I

LESSON PLAN

WELDING SHOP-I

Name of Faculty : Sh. JAIKANWAR, W/I
Discipline : ECE, EE, Computer Engg.
Semester : Ist
Subject : Workshop Practice I
Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in welding Shop. Practice of striking arc (Minimum 4 continuous beads on 100 mm long M.S. flat).
			2	Practice of depositing beads on plate at different current levels. (Minimum 4 beads on M.S. plate at four setting of current level and differentiating their characteristics).
2			1	Preparation of lap joint using arc welding process. Preparation of butt joint using arc welding process. (100 mm long).
			2	Preparation of T Joint using arc welding (100mm x 6 mm M.S. Flat).

All Branch Students of Ist Sem are divided into Five Groups and the syllabus is repeated in each Shop after Two weeks for the next Group

FITTING SHOP-I

Name of Faculty : Sh. VIRENDER KUMAR W/I

Discipline : ECE, EE, Computer Engg.

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Fitting Shop.
			2	Marking of job, use of marking tools and various types of files, use of tri square, surface plate, filing and use of measuring instruments. (zero error and least count of Vernier calliper, Micrometer and Vernier height gauge).
2			1	Filing a rectangular/square piece to maintain dimensions within an accuracy of ± 0.5 mm.
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All Branch Students of Ist Sem are divided into Five Groups and the syllabus is repeated in each Shop after Two weeks for the next Group

SHEET METAL SHOP-I

Name of Faculty : Sh. Balwan Singh, W/I

Discipline : ECE, EE, Computer Engg.

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Sheet Metal Shop. Shearing practice on a sheet using hand shears.
			2	Prepare a seam joint of G.I. Sheet
2			1	Practice on making Single/(double) riveted lap joint/Butt Joint.
			2	Development of sheet for preparation of cubical container(300x150x25 mm)

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ELECTRIC SHOP-I

Name of Faculty : Sh. VIPIN KUMAR W/I

Discipline : ECE, EE, Computer Engg.

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in Electric Shop. Identification of phase, Neutral and Earth wires for connection to domestic electrical appliances and their connections to three pin plugs. Difference between series and parallel wiring.

			2	Carrying out house wiring circuits using fuse, switches, sockets, ceiling rose etc. in batten or P.V.C. casing-caping. Demo of conduit wiring through junctions To prepare a three level Godown wiring circuit with PVC conduit wiring system.
2			1	Installation of battery and connecting two or three batteries in series and parallel and its effect. Charging a battery and testing with hydrometer and cell tester
			2	Installation of Solar cells, costing according to capacity

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ELECTRONIC SHOP-I

Name of Faculty : Sh. Sudarshan Vats, F/I

Discipline : ECE, EE, Computer Engg.

Semester : Ist

Subject : Workshop Practice I

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Introduction about Workshops, orientation & Safety precaution in ElectronicShop. Identification and familiarization with the following tools used in electronic shop such as Tweezers, Screw drivers (different sizes), Insulated Pliers, Cutter, Sniper, Screw Driver (Star Screw Driver), L- Keys, Soldering Iron, soldering wire, flux . Their demonstration and uses.
			2	Identification, familiarization and uses of commonly used components ; active and passive components; colour code and types of resistor and potentiometers ,Diode, Transistor, LED, LDR, SCR, TRIAC,DIAC, Thermistor etc.
2			1	Identification, familiarization, demonstration and use of the following electronic instruments: Analog multimeter and Digital multimeter
			2	Identification, familiarization, demonstration and use of the following electronic instruments: a) Simple CRO, function of every knob on the front panel b) Power supply, fixed voltage and variable voltage, single output as well as dual output. c) Function generator

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