

WORKSHOP PRACTICE - II

LESSON PLAN

WELDING SHOP-II

Name of Faculty : Sh. JAIKANWAR, W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups
2			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.
			2	Identification and adjustment of various types of gas flames. Practice them on pipe joint in round and linear fashion Preparation of lap joint on 75 mm × 35 mm × 3mm M.S. plate using gas welding.
3			1	Preparation of butt joint on 75mm×35mm×3mm M.S.flat using gas welding process.Preparation of a small cot frame (M.S. steel bed frame) from M.S. conduit pipe using gas welding process.
			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process
4			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.
			2	Identification and adjustment of various types of gas flames. Practice them on pipe joint in round and linear fashion Preparation of lap joint on 75 mm × 35 mm × 3mm M.S. plate using gas welding.
5			1	Preparation of butt joint on 75mm×35mm×3mm M.S.flat using gas welding process.Preparation of a small cot frame (M.S. steel bed frame) from M.S. conduit pipe using gas welding process.
			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process

6			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.
			2	Identification and adjustment of various types of gas flames. Practice them on pipe joint in round and linear fashion Preparation of lap joint on 75 mm × 35 mm × 3mm M.S. plate using gas welding.
7			1	Preparation of butt joint on 75mm×35mm×3mm M.S.flat using gas welding process.Preparation of a small cot frame (M.S. steel bed frame) from M.S. conduit pipe using gas welding process.
			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process
8			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.
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			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process
10			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.
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11			1	Preparation of butt joint on 75mm×35mm×3mm M.S.flat using gas welding process.Preparation of a small cot frame (M.S. steel bed frame) from M.S. conduit pipe using gas welding process.
			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process
			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.

12			2	Identification and adjustment of various types of gas flames. Practice them on pipe joint in round and linear fashion Preparation of lap joint on 75 mm × 35 mm × 3mm M.S. plate using gas welding.
13			1	Preparation of butt joint on 75mm×35mm×3mm M.S.flat using gas welding process.Preparation of a small cot frame (M.S. steel bed frame) from M.S. conduit pipe using gas welding process.
			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process
14			1	Introduction to gas welding, gas welding equipment, introduction to soldering and brazing, introduction to resistance welding, safety precautions.
			2	Identification and adjustment of various types of gas flames. Practice them on pipe joint in round and linear fashion Preparation of lap joint on 75 mm × 35 mm × 3mm M.S. plate using gas welding.
15			1	Preparation of butt joint on 75mm×35mm×3mm M.S.flat using gas welding process.Preparation of a small cot frame (M.S. steel bed frame) from M.S. conduit pipe using gas welding process.
			2	Preparation of a square pyramid from M.S. rod by welding (Arc or Gas welding).Practice of Spot/Seam welding or repair of an iron furniture of institute or demo of Gas cutting process

FITTING SHOP-II

Name of Faculty : Sh. VIRENDER KUMAR W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups

2			1	Care and maintenance of various measuring tools. Handling of measuring instruments, finding least count and checking of zero error. Use of dial gauges and feeler gauges. Description and demonstration of various types of drills, taps and dies. Selection of drills and taps. Precautions while drilling soft metals (Aluminium, Copper, Brass etc.). Drilling practice on soft metals- Aluminium
			2	Preparation of a job by filing on non ferrous metals upto an accuracy of ± 0.1 mm.
3			1	File and make angle, surfaces (Bevel gauge accuracy 1 degree) make simple open and sliding fits Inside square fit, make combined open and sliding fit, straight sides Step fit(.02mm accuracy) or angular V fit(30 minute) or radius fitting(40x40x3mm MS sheet)
			2	Sliding fitting, Diamond fitting, Lapping flat surfaces using lapping plate. Application of lapping, material for lapping tools, lapping abrasives, charging of lapping tool. Surface finish importance, T fit or H fit with highest lapped accuracy to be checked by feeler gauge or any as deemed to be. equipment for testing-terms relation to surface finish
4			1	Care and maintenance of various measuring tools. Handling of measuring instruments, finding least count and checking of zero error. Use of dial gauges and feeler gauges. Description and demonstration of various types of drills, taps and dies. Selection of drills and taps. Precautions while drilling soft metals (Aluminium, Copper, Brass etc.). Drilling practice on soft metals- Aluminium
			2	Preparation of a job by filing on non ferrous metals upto an accuracy of ± 0.1 mm.
5			1	File and make angle, surfaces (Bevel gauge accuracy 1 degree) make simple open and sliding fits Inside square fit, make combined open and sliding fit, straight sides Step fit(.02mm accuracy) or angular V fit(30 minute) or radius fitting(40x40x3mm MS sheet)
			2	Sliding fitting, Diamond fitting, Lapping flat surfaces using lapping plate. Application of lapping, material for lapping tools, lapping abrasives, charging of lapping tool. Surface finish importance, T fit or H fit with highest lapped accuracy to be checked by feeler gauge or any as deemed to be. equipment for testing-terms relation to surface finish

6			1	Care and maintenance of various measuring tools. Handling of measuring instruments, finding least count and checking of zero error. Use of dial gauges and feeler gauges. Description and demonstration of various types of drills, taps and dies. Selection of drills and taps. Precautions while drilling soft metals (Aluminium, Copper, Brass etc.). Drilling practice on soft metals- Aluminium
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8			1	Care and maintenance of various measuring tools. Handling of measuring instruments, finding least count and checking of zero error. Use of dial gauges and feeler gauges. Description and demonstration of various types of drills, taps and dies. Selection of drills and taps. Precautions while drilling soft metals (Aluminium, Copper, Brass etc.). Drilling practice on soft metals- Aluminium
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14			1	Care and maintenance of various measuring tools. Handling of measuring instruments, finding least count and checking of zero error. Use of dial gauges and feeler gauges. Description and demonstration of various types of drills, taps and dies. Selection of drills and taps. Precautions while drilling soft metals (Aluminium, Copper, Brass etc.). Drilling practice on soft metals- Aluminium
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15			1	File and make angle, surfaces (Bevel gauge accuracy 1 degree) make simple open and sliding fits Inside square fit, make combined open and sliding fit, straight sides Step fit(.02mm accuracy) or angular V fit(30 minute) or radius fitting(40x40x3mm MS sheet)
			2	Sliding fitting, Diamond fitting, Lapping flat surfaces using lapping plate. Application of lapping, material for lapping tools, lapping abrasives, charging of lapping tool. Surface finish importance, T fit or H fit with highest lapped accuracy to be checked by feeler gauge or any as deemed to be. equipment for testing-terms relation to surface finish

SHEET METAL SHOP-II

Name of Faculty : Sh. SATISH KUMAR W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups
2			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process
3			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.

4			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process
5			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.
6			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process
7			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.
8			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process
9			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.
10			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process
11			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.
12			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process

13			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.
14			1	Introduction to various metal forming processes e.g. Spinning, Punching, Blanking, cup drawing. Introduction to soldering and brazing. Introduction to metal spinning process. Preparation of job involving shearing, circular shearing, rolling, folding, beading and soldering process e.g. Funnel/oil can/bucket or any other job involving above operations.
			2	Exercise on job involving brazing process
15			1	Spinning a bowl/cup/saucer
			2	Visit to a sheet metal industry e.g. coach builders etc.

ELECTRIC SHOP-II

Name of Faculty : Sh. VIPIN KUMAR W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups
2			1	Introduction to single phase and three phase supply and wiring system. Importance of three phase supply (RYB)& its sequence and wiring system. Connecting Generator and 3 phase wiring through Change over Switch. Estimating and costing of power consumption. Connecting single phase energy meter with supply and load. Reading and working out power consumption and cost of energy.
			2	Study of internal wiring diagram of common electrical appliances such as auto electric iron, electric kettle, ceiling/table fan, desert cooler etc. Demonstration of dismantling, servicing and reassembling of table/ceiling fan, air-cooler, auto electric iron, heater etc. Dismantling, servicing and reassembling of any of the above electrical appliances, finding faults with series testing lamp and multimeter.
			1	Testing and reversing direction of rotation of single phase and three phase motors. Acceptance Testing of single phase/three phase motors by using voltmeter, ammeter and tachometer. Reversing direction of rotation of single phase and three phase motors.

3			2	tools: Tweezers, Screw Drivers (Different sizes), Insulated pliers, Cutters, Sniper, Philips Screw driver (star screw driver), L-Keys, Soldering Iron and their demonstration and uses. Practice on joining using soldering flux and removing components/wires by desoldering
4			1	Introduction to single phase and three phase supply and wiring system. Importance of three phase supply (RYB)& its sequence and wiring system. Connecting Generator and 3 phase wiring through Change over Switch. Estimating and costing of power consumption Connecting single phase energy meter with supply and load. Reading and working out power consumption and cost of energy.
			2	Study of internal wiring diagram of common electrical appliances such as auto electric iron, electric kettle, ceiling/table fan, desert cooler etc. Demonstration of dismantling, servicing and reassembling of table/ceiling fan, air-cooler, auto electric iron, heater etc. Dismantling, servicing and reassembling of any of the above electrical appliances, finding faults with series testing lamp and multimeter.
5			1	Testing and reversing direction of rotation of single phase and three phase motors. Acceptance Testing of single phase/three phase motors by using voltmeter, ammeter and tachometer. Reversing direction of rotation of single phase and three phase motors.
			2	tools: Tweezers, Screw Drivers (Different sizes), Insulated pliers, Cutters, Sniper, Philips Screw driver (star screw driver), L-Keys, Soldering Iron and their demonstration and uses. Practice on joining using soldering flux and removing components/wires by desoldering
6			1	Introduction to single phase and three phase supply and wiring system. Importance of three phase supply (RYB)& its sequence and wiring system. Connecting Generator and 3 phase wiring through Change over Switch. Estimating and costing of power consumption Connecting single phase energy meter with supply and load. Reading and working out power consumption and cost of energy.

5			2	Study of internal wiring diagram of common electrical appliances such as auto electric iron, electric kettle, ceiling/table fan, desert cooler etc. Demonstration of dismantling, servicing and reassembling of table/ceiling fan, air-cooler, auto electric iron, heater etc. Dismantling, servicing and reassembling of any of the above electrical appliances, finding faults with series testing lamp and multimeter.
7			1	Testing and reversing direction of rotation of single phase and three phase motors. Acceptance Testing of single phase/three phase motors by using voltmeter, ammeter and tachometer. Reversing direction of rotation of single phase and three phase motors.
			2	tools: Tweezers, Screw Drivers (Different sizes), Insulated pliers, Cutters, Sniper, Philips Screw driver (star screw driver), L-Keys, Soldering Iron and their demonstration and uses. Practice on joining using soldering flux and removing components/wires by desoldering
8			1	Introduction to single phase and three phase supply and wiring system. Importance of three phase supply (RYB)& its sequence and wiring system. Connecting Generator and 3 phase wiring through Change over Switch. Estimating and costing of power consumption Connecting single phase energy meter with supply and load. Reading and working out power consumption and cost of energy.
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9			1	Testing and reversing direction of rotation of single phase and three phase motors. Acceptance Testing of single phase/three phase motors by using voltmeter, ammeter and tachometer. Reversing direction of rotation of single phase and three phase motors.
			2	tools: Tweezers, Screw Drivers (Different sizes), Insulated pliers, Cutters, Sniper, Philips Screw driver (star screw driver), L-Keys, Soldering Iron and their demonstration and uses. Practice on joining using soldering flux and removing components/wires by desoldering

10			1	Introduction to single phase and three phase supply and wiring system. Importance of three phase supply (RYB)& its sequence and wiring system. Connecting Generator and 3 phase wiring through Change over Switch.Estimating and costing of power consumption Connecting single phase energy meter with supply and load. Reading and working out power consumption and cost of energy.
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15			1	Testing and reversing direction of rotation of single phase and three phase motors. Acceptance Testing of single phase/three phase motors by using voltmeter, ammeter and tachometer. Reversing direction of rotation of single phase and three phase motors.
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CARPENTARY SHOP-II

Name of Faculty : Sh. SATISH KUMAR W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups

2			1	Introduction to joints, their relative advantages and uses. Preparation of glued joint mitre joint
			2	Preparation of a lengthening joint . Demonstration of job showing use of Rip Saw, Bow saw and Tenon saw, method of sharpening various saws. Demonstration of job on Band Saw and Circular Saw, Chain and Chisel, Universal wood working machine, Saw re-sharpening machine, Saw Brazing unit.
3			1	Importance and need of polishing wooden items, Introduction to polishing materials. Practice on Wood Working Lathe Safety precaution on wood working machines.Study of wood working lathe. Making Handles of chisels/files/screw drivers etc. Sharpening of lathe tools . Setting of jobs and tools. Different type of wood turning practice. Making legs of cabinets: Straight, Tapered and Ornamental
			2	Repair of wooden furniture of the Institute
4			1	Introduction to joints, their relative advantages and uses. Preparation of glued joint mitre joint
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6			1	Introduction to joints, their relative advantages and uses. Preparation of glued joint mitre joint
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7			1	Importance and need of polishing wooden items, Introduction to polishing materials. Practice on Wood Working Lathe Safety precaution on wood working machines.Study of wood working lathe. Making Handles of chisels/files/screw drivers etc. Sharpening of lathe tools . Setting of jobs and tools. Different type of wood turning practice. Making legs of cabinets: Straight, Tapered and Ornamental
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			2	Repair of wooden furniture of the Institute
14			1	Introduction to joints, their relative advantages and uses. Preparation of glued joint mitre joint
			2	Preparation of a lengthening joint . Demonstration of job showing use of Rip Saw, Bow saw and Tenon saw, method of sharpening various saws. Demonstration of job on Band Saw and Circular Saw, Chain and Chisel, Universal wood working machine, Saw re-sharpening machine, Saw Brazing unit.
15			1	Importance and need of polishing wooden items, Introduction to polishing materials. Practice on Wood Working Lathe Safety precaution on wood working machines.Study of wood working lathe. Making Handles of chisels/files/screw drivers etc. Sharpening of lathe tools . Setting of jobs and tools. Different type of wood turning practice. Making legs of cabinets: Straight, Tapered and Ornamental
			2	Repair of wooden furniture of the Institute

SMITHY SHOP-II

Name of Faculty : Sh. NAVEEN KUMAR W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory	Practical Day	Practicals
		Assignments		Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups

2			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
3			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process
4			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
5			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process
6			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
7			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process
8			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
9			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process
10			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
11			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process

12			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
13			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process
14			1	Introduction to various heat treatment processes e.g annealing, hardening, tempering, normalizing etc. Description of various types of power hammers and their usage (Demonstration only). To forge a ring to acquaint the students with forge welding.
			2	To forge a chisel and acquaint the students with simple idea of hardening and tempering.
15			1	To forge squares on both ends of a circular rod.
			2	To prepare a job involving drawing down process

PLUMBING SHOP-II

Name of Faculty : Sh. VIRENDER KUMAR W/I

Discipline : ALL BRANCHES

Semester : 2nd

Subject : Workshop Practice II

Work Load : Practicals 06

Week	Lecture day	Theory Assignments	Practical Day	Practicals Topic
1			1	Orientation to all shops and Introduction
			2	Safety precautions and introduction about the individual shop in groups
2			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank

3			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)
4			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank
5			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)
6			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank
7			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)

8			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank
9			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)
10			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank
11			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)

12			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank
13			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)
14			1	Introduction to various types of threads (internal and external)-single start, multi-start, left hand and right hand threads. Description and demonstration of various types of drills, taps and dies. Selection of dies for threading, selection of drills, taps and reamers for tapping operations. Introduction to use of plumbing tools like pipe wrench , plumber vice and materials like Putty, thread, duct(Teflon) tape, epoxy resin, araldite, m-seal. Making internal and external threads on a job by tapping and die operations (manually)
			2	Precautions while drilling soft metals, e.g. copper, brass, aluminium etc. Fitting of all components of wash basin and ball valve in a tank
15			1	Practice on opening a jammed pipe(MS or PVC) joint with least damage and repair of a leaking joint, reconditioning of a tap.
			2	Preparation of job involving thread on GI pipe/ PVC pipe and fixing of at least 5 types of fittings (viz. elbow, tee, union, socket, reducer, nipple, stopcock, taps etc)

WORKSHOP PRACTICE - II
LESSON PLAN

TURNING SHOP				
Name of Faculty : Sh. Rao Virender Singh, W/I				
Discipline : Mech. Engg.				
Semester : IV				
Subject : Workshop Practice II				
Work Load : Practicals 09 Period/ week				
Week	Lecture day	Theory assignments	Practical Day	Practicals Topic
1			1	Introduction to Single Point Cutting Tool and Multipoint Cutting Tool, Brief Introduction of Grinder, Its parts and Safety Precaution. Cleaning, Oiling and greasing of Machine
			2	Practice a job of Grinding of Single Point turning Tool
			3	-do-
2			1	Introduction of Lathe Machine, Explain Parts of Lathe Machine and different operations of Lathe Machine, Cleaning, Oiling and greasing of Lathe Machine tools, Explain Safety
			2	Practice a job of Simple Turning Operation
			3	-do-
3			1	Practice a job of Step Turning Operation
			2	Practice a job involving Turning, Taper Turning, External Thread Cutting, Knurling
			3	-do-
4			1	Introduction to Single Point Cutting Tool and Multipoint Cutting Tool, Brief Introduction of Grinder, Its parts and Safety Precaution. Cleaning, Oiling and greasing of Machine
			2	Practice a job of Grinding of Single Point turning Tool
			3	-do-
5			1	Introduction of Lathe Machine, Explain Parts of Lathe Machine and different operations of Lathe Machine, Cleaning, Oiling and greasing of Lathe Machine tools
			2	Practice a job of Simple Turning Operation
			3	Practice a job involving Turning, Taper Turning, External Thread Cutting, Knurling

ADVANCE FITTING SHOP

Name of Faculty : Sh. Radhe Shyam, W/I				
Discipline : Mech. Engg.				
Semester : IV				
Subject : Workshop Practice II				
Work Load : Practicals 09 Period/ week				
Week	Lecture day	Theory assignments	Practical Day	Practicals Topic
1			1	Introduction of Drilling Machine, Explain its Parts and Working of Drilling machine, Cleaning, Oiling and greasing of Drilling Machine, Explain Safety Precautions.
			2	Prepare jobs on Drilling and Reaming
			3	-do-
2			1	Prepare jobs on Counter Boring, Counter Sinking and Taping
			2	-do-
			3	Practice jobs on Dovetail fitting in Mild Steel
3			1	-do-
			2	Practice Jobs on Radius fitting in mild steel
			3	Practice Jobs on Pipe Threading With die
4			1	Prepare jobs on Drilling and Reaming
			2	Prepare jobs on Counter Boring, Counter Sinking and Taping
			3	Prepare jobs on Drilling and Reaming
5			1	Practice jobs on Dovetail fitting in Mild Steel
			2	Practice Jobs on Radius fitting in mild steel
			3	Practice Jobs on Pipe Threading With die

MACHINE SHOP

Name of Faculty : Sh. HARI KISHAN, W/I	
Discipline : Mech. Engg.	
Semester : IV	

Subject :		Workshop Practice II		
Work Load :		Practicals 09 Period/ week		
Week	Lecture day	Theory	Practical Day	Practicals
		Assignment		Topic
1			1	Introduction of Shaper Machine, Explain Parts of Shaper Machine, Cleaning Oiling and Greasing of Shaper Machine, Explain Safety Precautions.
			2	Prepare a V-Block upto 0.5 mm accuracy on Shaper Machine
			3	-do-
2			1	-do-
			2	Exercise on keyway cutting and spline cutting on shaper machine
			3	-do-
3			1	Introduction of Shaper Machine, Explain Parts of Shaper Machine, Cleaning Oiling and Greasing of Shaper Machine, Explain Safety Precautions.
			2	Prepare a V-Block upto 0.5 mm accuracy on Shaper Machine
			3	Exercise on keyway cutting and spline cutting on shaper machine
4			1	Introduction of Shaper Machine, Explain Parts of Shaper Machine, Cleaning Oiling and Greasing of Shaper Machine, Explain Safety Precautions.
			2	Prepare a V-Block upto 0.5 mm accuracy on Shaper Machine
			3	Exercise on keyway cutting and spline cutting on shaper machine
5			1	Introduction of Shaper Machine, Explain Parts of Shaper Machine, Cleaning Oiling and Greasing of Shaper Machine, Explain Safety Precautions.
			2	Prepare a V-Block upto 0.5 mm accuracy on Shaper Machine
			3	Exercise on keyway cutting and spline cutting on shaper machine

All Students of IV Sem Mech Engg divides into Three Groups Namely Turning Shop, Advance Fitting Shop and Machine Shop and Repeat this Syllabus to all Three Groups

LESSON PLAN

Name of Faculty : Dr. A.P. Dahiya F/I, Sh. D.S. Mor F/I, Sh. Sudarshan Vats F/I, Sh. Hari Om F/I

Discipline : Mech. Engg.

Semester : VI

Subject : PROJECT WORK

Work Load : Practicals 15 Period/ week

Week	Lecture day	Theory assignment	Practical Day	Practicals
				Topic
1			1	Market Survey and Finilization of Project by the Students
			2	-do-
			3	-do-
			4	-do-
2			1	-do-
			2	-do-
			3	-do-
			4	-do-
3			1	Project Work Execution
			2	-do-
			3	-do-
			4	-do-
4			1	-do-
			2	-do-
			3	-do-
			4	-do-
5			1	-do-
			2	-do-
			3	-do-
			4	-do-
6			1	-do-
			2	-do-
			3	-do-
			4	-do-
7			1	-do-
			2	-do-
			3	-do-
			4	-do-
8			1	-do-
			2	-do-
			3	-do-
			4	-do-
		1	-do-	

9			2	-do-
			3	-do-
			4	-do-
10			1	-do-
			2	-do-
			3	-do-
11			4	-do-
			1	-do-
			2	-do-
12			3	-do-
			4	-do-
			1	-do-
13			2	-do-
			3	-do-
			4	-do-
14			1	Project Report Writing
			2	-do-
			3	-do-
15			4	-do-
			1	-do-
			2	-do-
		3	-do-	
		4	Proect Work Internal Viva-Voce	