

Syllabus for the subject

of

**TRADE THEORY
&
TRADE PRACTICAL**

For

SHEET METAL WORKER

Under

CRAFT INSTRUCTORS TRAINING SCHEME (CITS)

Re-Designed in

- 2014 -

**Government of India
Ministry of Labour & Employment
Directorate General of Employment & Training**

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A. RATIONALE

Success & Sustainability of any Training System mainly depends upon availability of good quality instructors. An Instructor should possess good trade skills to impart skill training. To cope up this quality possession of trade skills is imperative.

Ability to understand and interpret the course content is essential to perform a job / task of Engineering Trades. It is the Skills, Knowledge and Attitude which enables comprehending the given job and subsequent planning to complete the task/job. Thus it is imperative for any trade instructor to have skill so that same can be transferred.

For an instructor it is essential to have in depth knowledge set which enables analyzing the given job and subsequent detail planning. To transfer skill the practical know how is most important criteria as in ITI system skill is the ultimate requirement. To perform a task/job both theoretical and practical knowledge are very much needed. Thus Trade Technology is regarded as basic/hard skills which are base of all skill based training.

Recognizing this importance maximum weightage has been given to the Trade Technology in all Engineering Trades in Craft Instructors Training Scheme (CITS) under NCVT.

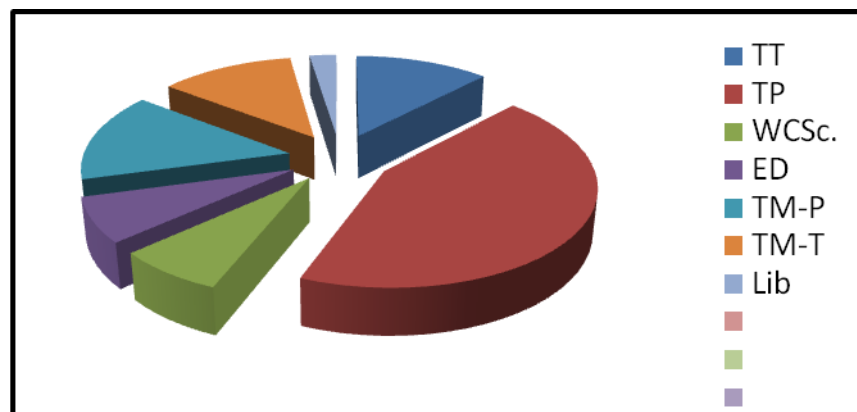
B. GENERAL INFORMATION

1. Name of the Course : CITS (Sheet Metal Worker)
2. Duration of Instructor Training : 1 Year (Two semesters each of six months duration).
3. Subjects covered in the Semesters : Detailed in Section - C
4. Name of the Subject : **TRADE THEORY –I & II and
TRADE PRACTICAL-I & II**
5. Applicability : Sheet Metal Worker Trade
6. Examination : AITT to be held at the end of each semester.
7. Space Norms : (a) One class room of minimum 30 sq. meter. area
having Minimum width of 5 m. and with 6000
(b) Workshop : 120 sq. meter having minimum
Width of 8 m. and with 30000 lumen
**The electrical equipments of Class room should
conform to minimum 3 star Building energy rating
as per Bureau of Energy Efficiency (B.E.E.)**
8. Power Norms : (a) 1 KW for Class room
(b) 15 KW for Workshop.
9. Unit strength(Batch Size) : 20
10. Entry qualification : Diploma/Degree in Mechanical/Production/
Metallurgy / Mechatronics Engineering from AICTE
recognized Board / University.
OR
National Trade Certificate in the relevant trade OR
National Apprenticeship Certificate in the relevant trade

C. SEMESTER WISE ALLOTMENT OF TIME & MARKS AMONG THE SUBJECTS FOR CITS

	SUBJECTS	Hrs. / Week	% of time allotted	Marks	Sessional	Full Marks	Pass Marks		
							Exam.	Sessional	Total
First semester	Trade Practical – 1	20	50	200	30	230	120	18	138
	Trade Theory - 1	6	15	100	20	120	60	12	72
	Workshop Cal. & Sc.	6	15	50	-	50	30	-	30
	Engineering Drawing	6	15	100	-	100	60	-	60
	Library	2	5	-	-				
	TOTAL for Sem. - I	40		450	50	500	270	30	300
Second semester	Trade Practical – 2	16	40	200	30	230	120	18	138
	Trade Theory - 2	4	10	100	20	120	60	12	72
	Training Methodology - Practical	12	30	200	30	230	120	18	138
	Training Methodology - Theory + IT	6+2	20	100	20	120	60	12	72
	TOTAL	40		600	100	700	360	60	420
	GRAND TOTAL	80		1050	150	1200	630	90	720

Hourly Distribution TOTAL: 1200 marks for 2 semesters Pass marks: 720



Subject	Time in %	Marks in %
Trade Practical	45	38.3
Trade Theory	12.5	20
1) Total for Trade	57.5	58.3
Training Methodology (Practical)	15	19.2
Training Methodology (Theory) + IT	10	10
2) Total for Training Methodology & IT	25	29.2
3) Engineering Drawing	7.5	8.3
4) Workshop Cal. & Sc.	7.5	4.2
5) Library	2.5	-
TOTAL of 1 - 5	100	100

**SYLLABUS FOR
CRAFT INSTRUCTORS TRAINING SCHEME (CITS)
TRADE: SHEET METAL WORKER
TRADE TECHNOLOGY : I**

SL No.	PRACTICAL	THEORY
01	<ul style="list-style-type: none"> - Induction of training - Familiarisation with the Institute, - Importance of trade in Training - Machines used in the trade. - Induction to safety devices used in shop floor. 	<ul style="list-style-type: none"> - General discipline in the institute - Elementary of First aid - Importance of the sheet metal work in the Industry. - General safety precautions - Safety precaution in sheet metal work & protective devices - Terms & definitions in sheet metal work.
02	<ul style="list-style-type: none"> - Practice and cutting with different types of geometrical shapes by using hand snips (straight cut, right and left cut) cutting off inside and inside curves, cutting off notices and cutting profiles. 	<ul style="list-style-type: none"> - Description and uses of sheet metal tools , equipments and accessories (Measuring, Marking, cutting & holding tools) - Various types of hand snips and their uses, - Description and uses of hand shears ,
03	<ul style="list-style-type: none"> - Practice of single & double hemming & wiring practice (solid & false wiring). 	<ul style="list-style-type: none"> - Calculation of hemming & wiring allowance - Various types of machines used in sheet metal work (guillotine shears, circle cutting machine, bending machine, folding etc.)
04	<ul style="list-style-type: none"> - Practice on Sheet Metal seams : Grooved seam, Locked Grooved seam, Pane down seam. 	<ul style="list-style-type: none"> - Sheet Metal Folded Joints: Description of Sheet Metal Seam, Grooved seam, Locked Grooved seam, Pane down seam. .
05	<ul style="list-style-type: none"> - Bottom lock seam or Corner Fold (Knocked-up seam), Corner Clip Lock, Double Bottom Lock, Clip Lock (Cap Lock), snap Joint etc. 	<ul style="list-style-type: none"> - Knocked up seam inside and outside, capstrip seam, pitsburg seam etc - Folding & joining allowances, edge stiffening, wiring allowances & false wiring
06	<ul style="list-style-type: none"> - Folding, Bending Sheet Metal to 90 degree using wooden mallet, 'C' clamps etc. - Making a radius using Wooden blocks and Hairpin Folder. - Making a cylindrical container with knocked- up, bottom (Bottom Locked), Grooved Joint and hemmed Top. 	<ul style="list-style-type: none"> - Definitions of pattern, Development, stretched out pattern, Master pattern (gross pattern) and templates
07	<ul style="list-style-type: none"> - Forming frustum of Cone. - Making of Mug, scoop, measuring can - Hemming (single, Double) wire edge by hand process 	<ul style="list-style-type: none"> - Development of surfaces by parallel line method, and radial line method.

08	<ul style="list-style-type: none"> - Make a taper chute square to rectangle transition. Make a taper chute square to round. 	<ul style="list-style-type: none"> - Development of surfaces: Triangulation method and geometrical construction methods
09	<ul style="list-style-type: none"> - Making a hole with solid punches, round punches as per BIS. 	<ul style="list-style-type: none"> - Description of solid and hollow punches as per BIS. Sizes of solid and hollow Punches and their uses.
10	<ul style="list-style-type: none"> - Riveting practice using various types of rivet heads. - Single chain, Double chain and Zig- zag and Lap & butt riveted joints 	<ul style="list-style-type: none"> - Rivets and its parts, Selection of Rivet heads. Types of Rivet and their uses. - Standard sizes of Rivets and Riveting Tools. - Calculation for Riveting allowances (pitch and Lap)
11	<ul style="list-style-type: none"> - Making a dust pan (Corner and handle riveted) - Making a fire bucket with lap riveted joint on one side and Locked Grooved Seam on the other side. Bottom Hollowing and Bottom Lock Seam. 	<ul style="list-style-type: none"> - Fastening of Sheet Metal: - Self tapping screws, Clips and Connectors; Their uses, Types and Allowance of 'S' Clips, Government Clips, Drive Clips, Mailing Clips etc.
12	<ul style="list-style-type: none"> - Solder Lap joint - Single plated solder butt joint 	<ul style="list-style-type: none"> - Solder, Different types of solder and their composition. Types and uses of fluxes, their effect on different metal. Process of soft soldering
13	<ul style="list-style-type: none"> - Making an oil Can by hand process by soldering 	<ul style="list-style-type: none"> - Hard soldering process(brazing).
14	<ul style="list-style-type: none"> - Making funnel by soldering process 	<ul style="list-style-type: none"> - Heating appliances (Hand Forge, Blow Lamp, L.P.G.)
15	<ul style="list-style-type: none"> - Make by soldering - Elbow 90° equal dia pipe - T joint 90° equal dia pipe 	<ul style="list-style-type: none"> - Development & laying out pattern of Elbow pipe, T pipe and offset pipe in equal diameter.
16	<ul style="list-style-type: none"> - T joint 90° unequal dia pipe by soldering - T Pipe 60° branch joint unequal dia pipe - Offset T joint equal dia pipe 	<ul style="list-style-type: none"> - Development of T pipe joint for equal and unequal diameter pipes. - Introduction to tubes and pipes.
17	<ul style="list-style-type: none"> - Forming square section segmental quarter bend pipe with suitable lock and forming round section segmental quarter bend pipe 	<ul style="list-style-type: none"> - Laying out pattern of 60° off-set 'T' pipe. Pattern Development of 'Y' pipe. - Preparation of pickling solution.
18	<ul style="list-style-type: none"> - Making a square duct elbow with snap block 	<ul style="list-style-type: none"> - Protection-Coating, Cleaning and preparing of Sheet Metals Corrosion and anti corrosion treatment of sheet metal. - Method of galvanizing, tinning, anodising, sheradising and Electroplating

19	<ul style="list-style-type: none"> - Setting up of Oxy-acetylene plant and setting different type of flames. 	<ul style="list-style-type: none"> - Safety precaution in gas welding - Description of Oxyacetylene plant and the equipments, accessories & tools - Types of oxy-acetylene flames & its uses
20	<ul style="list-style-type: none"> - Setting up of arc welding plant and striking & maintaining of arc and laying short beads. 	<ul style="list-style-type: none"> - Safety precaution in arc welding - Description of arc welding plant and the equipments, accessories & tools
21	<ul style="list-style-type: none"> - Fusion run with/without filler rod in flat position. - Square butt joint in flat position by gas. 	<ul style="list-style-type: none"> - Types and description of flux - Types of welding blow pipes & its functions
22	<ul style="list-style-type: none"> - Straight line beads on ms plate 6mm in flat position by arc welding. 	<ul style="list-style-type: none"> - Brief description of Arc welding machines
23	Industrial visit and project work	
24	Industrial visit and project work	
25	Revision	
26	Examination	

**SYLLABUS FOR
CRAFT INSTRUCTORS TRAINING SCHEME (CITS)
TRADE: SHEET METAL WORKER
TRADE TECHNOLOGY : II**

WEEK No.	PRACTICAL	THEORY
1	<ul style="list-style-type: none"> - Importance of machinery used in the trade. - Types of job made by the trainees in trade - Introduction to machinery safety including firefighting equipment and their uses etc. - Locked groove joint on aluminum sheet 	<ul style="list-style-type: none"> - Importance of the trade in the development of Industrial Economy of the Country. - Review of Types of sheet metal Fabrication. - Methods of developments. - Introduction to Aluminum fabrication, and its applications.
2	<ul style="list-style-type: none"> - Single riveted lap joint on aluminum sheet. - Double strap single row riveted butt joint on aluminum sheet - Exercise involving practical work on Aluminium Sheet, and using . Pop Rivet. - Aluminium Windows with. different extruded sections, Aluminium Soldering 	<ul style="list-style-type: none"> - Ferrous and Non-Ferrous metals. Use of Copper and Alloys. - Laying out pattern of conical elbows. Pattern development of lobster back bends. - Chemical and Physical properties of Aluminium. - Use of Aluminium and its Alloys
03	<ul style="list-style-type: none"> - Making holes in sheet metal using Punching Machine. - Making holes in sheets with a twist drill. - 	<ul style="list-style-type: none"> - Brief Description of hand punch machine. Hand and Power operated drilling Machines. Drill Bits, parts and effects of cutting angles.
04	<ul style="list-style-type: none"> - Tri-paning with use of hand and electric drilling machine. Grinding a drill bit - Practice in Drilling Holes in walls and Ceilings as applied to ducting work. Use of rawl bits and rawl plug. 	<ul style="list-style-type: none"> - Angles for Drilling sheet metals, effect of speed, Feed Cutting Fluids, etc., on metals. - Difference between drilled and punched holes. - Description of swaging and beading machine, its parts, operating principles etc.
05	<ul style="list-style-type: none"> - Practice on pipe bending by hand. Pipe bending using Hydraulic Pipe bending' machine. - Development of a cone: Cylinder fitted to a cone. Equal dia pipe joint with crimping and Ogee beading 	<ul style="list-style-type: none"> - Introduction to pipe/tube bending. - Brief description of Hydraulic pipe bending machine. Operating Principles etc.
06	<ul style="list-style-type: none"> - Practice on external threading using "Die stock". - Practice on internal threading using taps. - Typical folding, Bending Practice, Making Steel-Racks, Reinforcement with angle iron. - Use of self tapping screws and other fasteners. 	<ul style="list-style-type: none"> - Description of roll forming machine types and operating principles, description of slip roll forming machine and its function - Use of Die and Die Holder, Description of taps and tap wrench.
07	<ul style="list-style-type: none"> - Project work such as Steel Stool, Aluminium Ladder etc. - Metal Spinning: Making a cylindrical 	<ul style="list-style-type: none"> - Method to operate folding/brake folder for typical folding. - Description and use of jigs and fixtures

	medicine container of Aluminium Sheet	
08	<ul style="list-style-type: none"> - Making a Copper article by use of power press and also making brass and stainless steel articles. - Practice of Buffing and polishing 	<ul style="list-style-type: none"> - Definition of Planishing and its application. Brief description of polishing machine. Various types of bobs and polishing compounds
09	<ul style="list-style-type: none"> - Pipe butt joint in down hand position - Butt joint on MS flat in down hand position by arc 	<ul style="list-style-type: none"> - Principle of arc welding. Types of welding machines and their uses. Advantages and disadvantages of AC/DC welding machines. - Arc length and its importance
10	<ul style="list-style-type: none"> - Fillet lap and T joint on MS flat in down hand position - Resistance welding. Spot welding, seam welding. 	<ul style="list-style-type: none"> - Welding defects - Principle of resistance welding. Types and applications. - Welding symbols
11	<ul style="list-style-type: none"> - CO₂ welding. Deposit bead on MS sheet in flat position. 	<ul style="list-style-type: none"> - Introduction to CO₂ welding process. Welding equipments and accessories..
12	<ul style="list-style-type: none"> - Lap joint T joint and butt joint in down hand position by CO₂ welding. 	<ul style="list-style-type: none"> - Advantages and application of CO₂ process
13	<ul style="list-style-type: none"> - TIG welding. Deposit bead on SS sheet in flat position. Making butt, Tee and corner joint by TIG welding.. 	<ul style="list-style-type: none"> - TIG welding process. Advantages. Description of equipments. Types of polarity and application
14	<ul style="list-style-type: none"> - Deposit bead on Aluminium sheet in flat position. Making butt, Tee and corner joint 	<ul style="list-style-type: none"> - Types of Tungsten Electrodes, Filler rods, Shielding Gases. - Defects, causes and remedy in TIG welding process
15	<ul style="list-style-type: none"> - Pipe butt joint on MS/SS by TIG welding process. 	<ul style="list-style-type: none"> - Latest sheet metal cutting techniques: Plasma cutting, Laser cutting, etc.
16	<ul style="list-style-type: none"> - Pipe Y joint on MS/SS by TIG welding process. 	<ul style="list-style-type: none"> - Latest sheet metal cutting techniques: water jet cutting and punching etc
17	<ul style="list-style-type: none"> - Make models of Aluminium sliding windows and doors. 	<ul style="list-style-type: none"> - Specification of aluminium channels angles, strips, tubes beadings, packing rubber, cardboard, glasses etc.
18	<ul style="list-style-type: none"> - Partitions of mini model rooms by using aluminum channels beadings etc 	<ul style="list-style-type: none"> - Tools and equipments used in aluminium fabrication. - Assembly & Sub assembly: Gaurding assembly, Door assembly, Chassis assembly, Cabinet assembly, Power pack assembly etc.
19	<ul style="list-style-type: none"> - Making Electrical Panel, trunk boxes fabrication and Painting . 	<ul style="list-style-type: none"> - Process of painting. Spray painting. Etch primer painting,
20	<ul style="list-style-type: none"> - Making ducts fabrication and Painting 	<ul style="list-style-type: none"> - Powder coating, buffing, grinding, and sanding. - Selection of different grit sizes.
21	<ul style="list-style-type: none"> - Installing procedure Auto CAD software. Auto CAD. Commands & use of different menus of Auto CAD. 	<ul style="list-style-type: none"> - Auto CAD software and its uses. Installing procedure of Auto CAD. Auto CAD command & use of different menus of Auto CAD
22	<ul style="list-style-type: none"> - Working practice on Auto –CAD with simple sheet metal drawings. 	<ul style="list-style-type: none"> - Familiarization with different option for creating dimension & adding text to drawing, creating

		drawing in different layers, line type color window format menu. - Creating sectional drawing & adding different type's pattern under hatch command in draw menu.
23	Industrial Visit / Project Work	
24	Industrial Visit / Project Work	
25	Revision / Mock Test	
26	Examination	

**E. LIST OF TOOLS & EQUIPMNT
FOR SEMESTER I &II**

No	Name of the Tools	Quantity
TRAINEES KIT		
1	Steel Rule 300 mm	20+1
2	Wing Divider 200 mm	20+1
3	Centre Punch 100 mm	20+1
4	Spring Dividers 150 mm	20+1
5	Ordinary Wooden Mallet	20+1
6	Soldering Copper Hatchet Type 0.25 kg	20+1
7	Cross Peen Hammer 0.25 kg with handle	20+1
8	Protractor with blade 150mm	20+1
9	Steel tape 2 metres	20+1
10	Ballpen hammer 0.5kg with handle	20+1
11	Scriber 150 mm x 3 mm (Engineer's)	20+1
12	Prick punch 100mm	20+1
13	Tye Square 6 inch	20+1
SHOP OUT FIT PER UNIT		
14	Steel Square 450 mm x 600 mm	4 Nos.
15	Sheet Metal Gauge	1 No
16	Hatcher Stake	4 Nos.
17	Stake Round and Bottom	4 Nos.
18	Half Moon Stake	4 Nos.
19	Funnel Stake	4 Nos.
20	Anvil Face Stake	4 Nos.
21	Bick Iron Stake	4 Nos.
22	Tinman's Horse	2 Nos.
23	Hammer Peaning with handle	4 Nos.
24	Hammer Creasing with handle	4 Nos.
25	Hammer Planishing with handle	4 Nos.
26	Hammer Block with handle	2 Nos.
27	Shear Tinman 300mm	8 Nos
28	Snip straight	8 Nos
29	Right cut snips 250mm	4 Nos
30	Left cut snips 250mm	4 Nos
31	Hand Shear Universal 250 mmID	4 Nos.
32	Hollow Punch set Round 3 mm Dia	2 Nos.
33	Rivet sets snap and Dolly combined 3 mm	4 Nos.
34	Chisel cold flat 25 mm x 250 mm .	4 Nos
35	Punch Letter 4 mm	1 set
36	Punch Number 4 mm	1 set
37	File flat 250 mm second cut	2 Nos.
38	File flat 250 mm smooth	2 Nos.
39	File flat 300 mm bastard	2 Nos.

40	File half round 300 mm smooth	2 Nos.
41	Hacksaw frame 300 mm adjustable (Tubular)	4 Nos.
42	Hand Groover 5 mm	4 Nos.
43	Plier.Combination 150 mm	2 Nos.
44	Grip Wrench 200 mmID	2 .Nos.
45	Ladle 150 mm Dia.	2 Nos
46	Blow Lamp 1 litre.	2 Nos
47	H.S.S. Twist Drill 3 mm, 4 mm & 6 mm each (parallel Shank)	3 Nos.
48	Hand Drill machine 0 to 12 mm	2 Nos.
49	Soldering Copper Hatchet type 500 gms.	8 Nos
50	Pneumatic rivet gun	2 Nos.
51	Trammel Point (with beam 600 mm)	1 No.
52	Vernier caliper (0 mm - 150 rom)	1 No
53	Micrometer Outside (0 to 25 mm)	1 No.
54	File Rasp cut 250 mm	2 Nos.
55	D.E. Spanner G.P. (6 mm to 32 mm) (Set of 12 spanner)	2 Set
56	Bossing Mallet	4 Nos
57	End tacked Mallet	4 Nos
58	Soft hammer (Brass, copper, Lead)	4 Nos
59	Steel Rule 600mm	4 Nos
60	Oilcan pressure feed 500ml	2Nos
61	Raising hammer with handle	4 Nos
62	Rawl Punch holder and bits (No.8, 10, 12, 14)	2 . Sets
63	Hollowing Hammer with handle	4 Nos.
64	Tripaning tool 70 mm	1 No.
65	Hand vice 50 mm	4 Nos.
66	Tongs Flat	2 Pairs.
67	Portable Electric drill (Single phase) -6mm	2 Nos
68	Pop rivet gun	2 Nos.
69	Lazy Tong	2 Nos.
70	Screw Driver 250 mm	2 Nos.
71	Round File 2nd Cut 250 mm	4 Nos.
72	Triangular File 'Smooth 250 mm	4 Nos.
73	Square File 2nd Cut 250 mm.	4 Nos.
74	Needle File (Swiss File) 150 mm	1 set
75	'C' Clamp 150 mm	2 Nos.
76	Soft faced Hammer	4 Nos
GENERAL INSTALLATIONS		
77	Bench leaver shears 250 mm Blade x 3mm Capacity	1 No.
78	Air Compressor (Pressure and displacement of air) Pneumatic Pop rivet Gun	1 . No
79	Spray Gun.(painting) 500 ml.	1 No.
80	Combination turning up and wiring machine	1 No.
81	Guillotine. Shearing Machine foot operated	1 No.
82	Oxy acetylene welding plant (complete set)	1 set
83	Circle cutting machine 300 mm dia	1 set
84	Pillar type drilling machine 12 mm	1 No.

85	Slip roll former 1.6. mm x 1000 mm	1 No.
86	D.E. Grinder Pedestal motorised 200 mm	1 No.
87	Anvil 50 kgs with Stand	1 No.
88	Bench vice 120 mm, 150 mm	2 each
89	Fly press Ball press No.4 single body	1 No.
90	Power Press 20 Tons	1 No.
91	Buffing and Polishing Machine	1 No.
92	Nibbling Machine	1 No.
93	Spinning Lathe	1 No.
94	Seaming Machine .	1 No.
95	Glass cutter – Diamond point	1 No.
96	Work Bench 1820 x 1310 x 760 mm	4 Nos.
97	Almirah 1820 x 1210 x 450 mm	2 Nos.
98	Metal rack 1820 x 1520 x 450 mm	2 Nos.
100	Steel Lockers with 8 Drawers .	2 Nos.
101	Fire extinguisher Soda Acid and foam type	1 each
102	Fire buckets with Stand·	4, Nos.
103	Black Board with Easel .	1 No.
104	Wooden Stool 450.mm.	1 No.
105	Portable Nibbler	2 Nos.
106	Portable Pneumatic Shear.	2 Nos.
107	Pipe Bending Machine (Hydraulic Type) 12 mm to 30 mm	1 No.
108	Hand Press Brake Capacity (0.8 mm)	1 No.
109	Beading Machine with 380 mm throat clearance (with crimping rollers)	1 No.
110	Tin smiths bench folder 600 x 1.6 mm	1 No.
111	Gas Welding Table 1220 mm x 760 mm	1 No.
112	Spot & Seam Welding Machine	1 No each.
113	Arc welding Transformer/ Rectifier/Inverter 300Amps with accessories	1 set
114	Co ₂ welding machine complete set 300Amps	1 set
115	TIG welding machine complete set 200 Amps	1 set
116	Universal cutting machine	1 No.

**F. LIST OF FURNITURE, ACCESSORIES AND AUDIO VISUAL AIDS
(COMMON FOR ALL ENGINEERING TRADES)**

S.No	Description of Furnitures/Accessories	Quantity
01	Class Room Chairs (armless) / Dual desk may also be allowed	30 /15
02	Class Room Tables (3ft X 2ft) / Dual desk may also be allowed	30 /15
03	Chair for Trainer (armed) movable	01
04	Table for Trainer (4 ½ ft X 2 ½ ft) with Drawer and cupboard	01
05	LCD Projector	01
06	Multimedia Computer System with all accessories with UPS (.5 KVA) with preloaded Auto CAD software latest version	05 set
07	Computer Table	01
08	White Board (6ft X 4 ft.)	01 no.
09	LCD Projector Screen	01
10	Air Conditioner 1.5Ton (OPTIONAL)	02
11	Wall Clock	01 no.
12	Wall charts, Transparencies and DVDs related to the trade	As required
13	Document Camera / Visualizer	01
14	Smart Board / Inter Active Board	01
15	Over Head Projector	01
16	Video Camera with stand	01
17	Printer cum Scanner	01
18	Laptop with all latest OS	01

G.LIST OF TRADE COMMITTEE MEMBERS

Sl. No	Names & Designation	Organisation	Remarks
Members of Sector Mentor council			
1	Dr.G.Buvashekar	AGM, WRI, Trichy	Chairman
2	Dr.K.Ashokkumar	AGM, BHEL, Trichy	Member
3	Prof. JyothiMukhopadhy	IIT, Ahmedabad	Member
4	B.Pattabhiraman	MD, GB Engineering, Trichy	Member
5	Dr.Rajeevkumar	IIT, Mandi	Member
6	Dr. Vishalchauhan	IIT, Mandi	Member
7	Shri D.K.Singh	ITI, Kanpur	Member
8	Shri. Navneet Arora	IIT, Roorkee	Member
9	Shri. R. K. Sharma	Head, SDC, JBM Group, Faridabad	Member
10	Shri. Puneet Sinha	Deputy Director, MSME, New Delhi	Member
Mentor			
1	Shri.DeepankarMallick	Director of Training, DGE&T Hq,	Mentor
Members of Core Group			
1	Shri. M Thamizharasan	JDT, CSTARI, Kolkata	Member
2	Shri. M Kumaravel	DDT, FTI , Bangalore	Team Leader
3	Shri. SushilKumar	DDT, DGE&T Hq,	Member
4	Shri. S.P.Khatokar	T.O. ATI, Mumbai	Member
5	Shri. V.L. Ponmozhi	TO, CTI, Chennai	Member
6	Shri. D.Pani	TO, ATI, Howrah	Member
7	Shri. Amar Singh	TO, ATI, Ludhiyana	Member
8	Shri. Gopalakrishnan	TO, NIMI, Chennai	Member