

UPHOLSTERER

COMPETENCY BASED CURRICULUM

(Duration: 2 Yrs.)

APPRENTICESHIP TRAINING SCHEME (ATS)

NSQF LEVEL- 4



Skill India
कौशल भारत - कुशल भारत
SECTOR - APPAREL



GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

UPHOLSTERER

(Revised in 2018)

APPRENTICESHIP TRAINING SCHEME (ATS)



Skill India
कौशल भारत - कुशल भारत

Developed By

Ministry of Skill Development and Entrepreneurship
Directorate General of Training
CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE
EN-81, Sector-V, Salt Lake City,
Kolkata – 700 091

The DGT sincerely expresses appreciation for the contribution of the Industry, State Directorate, Trade Experts and all others who contributed in revising the curriculum. Special acknowledgement to the following industries/organizations who have contributed valuable inputs in revising the curricula through their expert members:

1. College of Leather Technology, Kolkata
2. Kanchpara Technical School, E. Rly
3. Calcutta State Transport Corporation
4. S.I.S.I, Kolkata

Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

Sl. No.	Name & Designation Sh./Mr./Ms.	Organization	Expert Group Designation
1.	S.R. Majumdar, Director	CSTARI, Kolkata	Chairman
2.	S.K. Das, Asst. Professor	College of Leather Technology, Kolkata	Member
3.	T.K. Dey	Kanchpara Technical School, E. Rly	Member
4.	T.K. Dutta	Calcutta State Transport Corporation	Member
5.	Dilip Guharay	Calcutta State Transport Corporation	Member
6.	G.C. Das, Investigator	S.I.S.I, Kolkata	Member
7.	A.K. Pal, DDT	RDAT(E.R.), Kolkata	Member
8.	R.M. Sinha, JDT	CSTARI, Kolkata	Member
9.	D.P. Ganguli, JDT	CSTARI, Kolkata	Member
10.	K.P. Chattopadhyay, JDT	CSTARI, Kolkata	Member
11.	T. Mukhopadhyay, DDT	CSTARI, Kolkata	Member
12.	Dr. S.K. Paul, DDT	CSTARI, Kolkata	Member
13.	P. Mandal, ADT	CSTARI, Kolkata	Member
14.	S. Bhattacharyya, TO	CSTARI, Kolkata	Member
15.	P.K. Koley, STA	CSTARI, Kolkata	Member

Sl. No.	Topics	Page No.
1.	Background	1-2
2.	Training System	3-7
3.	Job Role	8
4.	NSQF Level Compliance	9
5.	General Information	10
6.	Learning Outcome	11-12
7.	Learning Outcome with Assessment Criteria	13-15
8.	Syllabus	16-19
9.	Syllabus - Core Skill	20-25
	9.1 Core Skill – Workshop Calculation & Science and Engineering Drawing	20-21
	9.2 Core Skill – Employability Skill	22-25
10.	Details of Competencies (On-Job Training)	26
11.	List of Trade Tools & Equipment Basic Training - Annexure I	27-32
12.	Format for Internal Assessment -Annexure II	33

1.1 Apprenticeship Training Scheme under Apprentice Act 1961

The Apprentices Act, 1961 was enacted with the objective of regulating the programme of training of apprentices in the industry by utilizing the facilities available therein for imparting on-the-job training. The Act makes it obligatory for employers in specified industries to engage apprentices in designated trades to impart Apprenticeship Training on the job in industry to school leavers and person having National Trade Certificate (ITI pass-outs) issued by National Council for Vocational Training (NCVT) to develop skilled manpower for the industry. There are four categories of apprentices namely; **trade apprentice, graduate, technician and technician (vocational) apprentices.**

Qualifications and period of apprenticeship training of **trade apprentices** vary from trade to trade. The apprenticeship training for trade apprentices consists of basic training followed by practical training. At the end of the training, the apprentices are required to appear in a trade test conducted by NCVT and those successful in the trade tests are awarded the National Apprenticeship Certificate.

The period of apprenticeship training for graduate (engineers), technician (diploma holders and technician (vocational) apprentices is one year. Certificates are awarded on completion of training by the Department of Education, Ministry of Human Resource Development.

1.2 Changes in Industrial Scenario

Recently we have seen huge changes in the Indian industry. The Indian Industry registered an impressive growth during the last decade and half. The number of industries in India have increased manifold in the last fifteen years especially in services and manufacturing sectors. It has been realized that India would become a prosperous and a modern state by raising skill levels, including by engaging a larger proportion of apprentices, will be critical to success; as will stronger collaboration between industry and the trainees to ensure the supply of skilled workforce and drive development through employment. Various initiatives to build up an adequate infrastructure for rapid industrialization and improve the industrial scenario in India have been taken.

1.3 Reformation

The Apprentices Act, 1961 has been amended and brought into effect from 22nd December, 2014 to make it more responsive to industry and youth. Key amendments are as given below:

- Prescription of number of apprentices to be engaged at establishment level instead of trade-wise.
- Establishment can also engage apprentices in optional trades which are not designated, with the discretion of entry level qualification and syllabus.
- Scope has been extended also to non-engineering occupations.
- Establishments have been permitted to outsource basic training in an institute of their choice.
- The burden of compliance on industry has been reduced significantly.



Skill India
कौशल भारत - कुशल भारत

2.1 GENERAL

Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers range of vocational training courses catering to the need of different sectors of economy/ Labour market. The vocational training programmes are delivered under aegis of National Council of Vocational Training (NCVT). Craftsman Training Scheme (CTS) and Apprenticeship Training Scheme (ATS) are two pioneer programmes of NCVT for propagating vocational training.

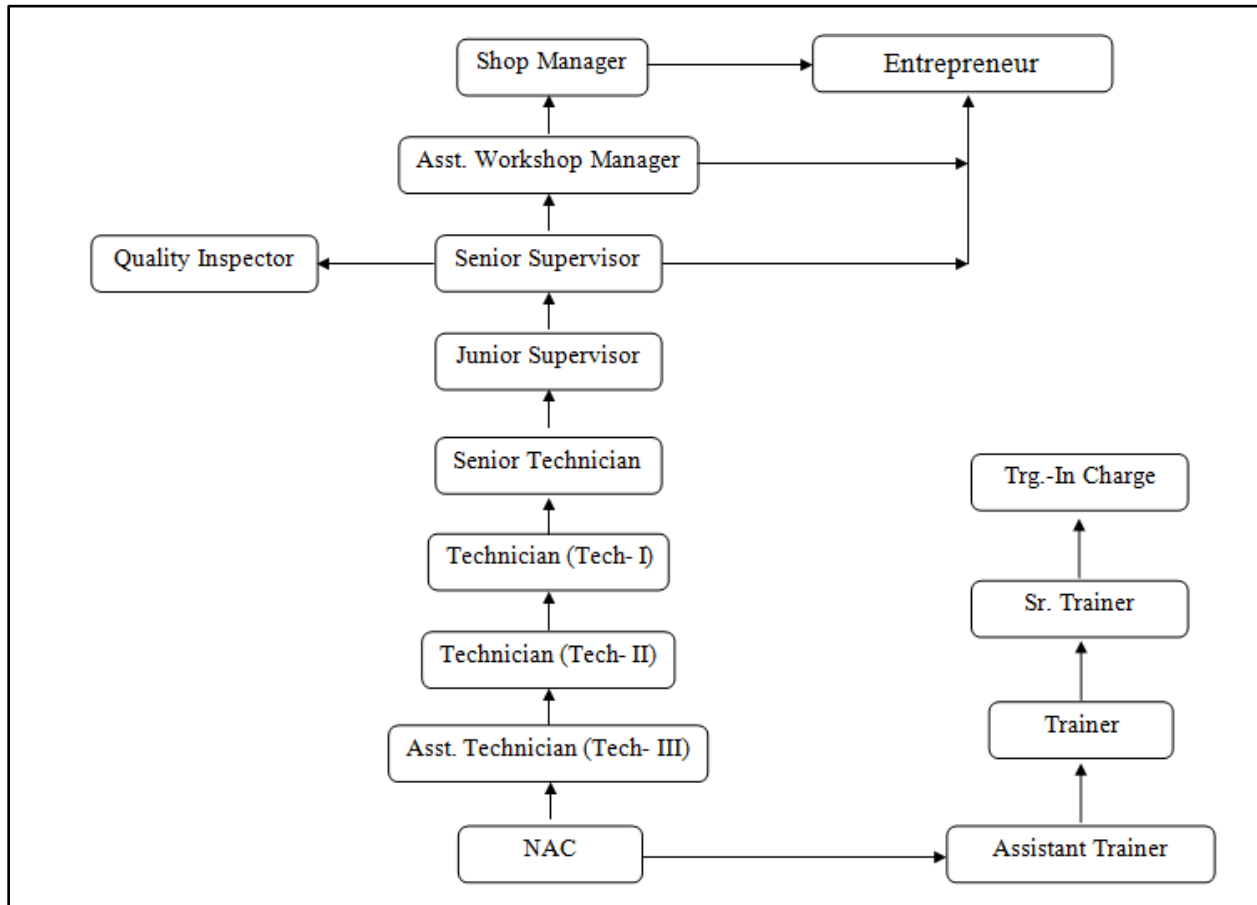
Upholsterer trade under ATS is one of the most popular courses delivered nationwide through different industries. The course is of two years (02 Blocks) duration. It mainly consists of Domain area and Core area. In the Domain area Trade Theory & Practical impart professional - skills and knowledge, while Core area - Workshop Calculation and science, Engineering Drawing and Employability Skills imparts requisite core skills & knowledge and life skills. After passing out the training programme, the trainee is being awarded National Apprenticeship Certificate (NAC) by NCVT having worldwide recognition.

Broadly candidates need to demonstrate that they are able to:

- Read & interpret technical parameters/document, plan and organize work processes, identify necessary materials and tools;
- Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- Apply professional skill, knowledge, core skills & employability skills while performing jobs and solve problem during execution.
- Document the technical parameters related to the task undertaken.

2.2 CAREER PROGRESSION PATHWAYS:

- Indicative pathways for vertical mobility.



2.3 COURSE STRUCTURE:

Table below depicts the distribution of training hours across various course elements during a period of two years (*Basic Training and On-Job Training*) :-

Total training duration details: -

Time (in months)	1-3	4-12	13-15	16-24
Basic Training	Block– I	-----	Block – II	-----
Practical Training (On - job training)	----	Block – I	-----	Block – II

Upholsterer

A. Basic Training

For 02 yrs. Course (Engg) :-**(Total 06 months: 03 months in 1styr. + 03 months in 2nd yr.)**

For 01 yr. course (Engg) :-**(Total 03 months: 03 months in 1styr.)**

S No.	Course Element	Total Notional Training Hours	
		For 02 Yrs. course	For 01 Yr. course
1.	Professional Skill (Trade Practical)	550	275
2.	Professional Knowledge (Trade Theory)	240	120
3.	Workshop Calculation & Science	40	20
4.	Engineering Drawing	60	30
5.	Employability Skills	110	55
	Total (Including internal assessment)	1000	500

B. On-Job Training:-

For 02 yrs. Course (Engg) :-**(Total 18 months: 09 months in 1styr. + 09 months in 2nd yr.)**

Notional Training Hours for On-Job Training: 3120 Hrs.

For 01 yr. course (Engg) :- (**Total 12 months**)

Notional Training Hours for On-Job Training: 2080 Hrs.

C. Total training hours:-

Duration	Basic Training	On-Job Training	Total
For 02 yrs. course (Engg)	1000 hrs.	3120 hrs.	4120 hrs.
For 01 yr. course (Engg)	500 hrs.	2080 hrs.	2580 hrs.

2.4 ASSESSMENT & CERTIFICATION:

The trainee will be tested for his skill, knowledge and attitude during the period of course and at the end of the training programme as notified by Govt of India from time to time. The Employability skills will be tested in first two semesters only.

a) The **Internal assessment** during the period of training will be done by **Formative assessment method** by testing for assessment criteria listed against learning outcomes. The training

Upholsterer

institute have to maintain individual *trainee portfolio* as detailed in assessment guideline. The marks of internal assessment will be as per the template (Annexure – II).

b) The final assessment will be in the form of summative assessment method. The All India Trade Test for awarding NAC will be conducted by NCVT on completion of course as per guideline of Govt of India. The pattern and marking structure is being notified by govt of India from time to time. **The learning outcome and assessment criteria will be basis for setting question papers for final assessment. The examiner during final examination will also check individual trainee's profile as detailed in assessment guideline before giving marks for practical examination.**

2.4.1 PASS REGULATION

The minimum pass percent for Practical is 60% & minimum pass percent for Theory subjects 40%. The candidate pass in each subject conducted under all India trade test.

2.4.2 ASSESSMENT GUIDELINE

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment. Due consideration should be given while assessing for team work, avoidance/reduction of scrap/wastage and disposal of scarp/wastage as per procedure, behavioral attitude, sensitivity to environment and regularity in training. The sensitivity towards OSHE and self-learning attitude are to be considered while assessing competency.

Assessment will be evidence based comprising the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work

Evidences of internal assessments are to be preserved until forthcoming semester examination for audit and verification by examination body. The following marking pattern to be adopted while assessing:

Performance Level	Evidence
(a) Weightage in the range of 60 -75% to be allotted during assessment	
For performance in this grade, the	• Demonstration of good skill in the use of

Upholsterer

<p>candidate with occasional guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.</p>	<p>hand tools, machine tools and workshop equipment</p> <ul style="list-style-type: none">• Below 70% tolerance dimension/accuracy achieved while undertaking different work with those demanded by the component/job/set standards.• A fairly good level of neatness and consistency in the finish• Occasional support in completing the project/job.
<p>(b) Weightage in the range of above 75% - 90% to be allotted during assessment</p>	
<p>For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.</p>	<ul style="list-style-type: none">• Good skill levels in the use of hand tools, machine tools and workshop equipment• 70-80% tolerance dimension/accuracy achieved while undertaking different work with those demanded by the component/job/set standards.• A good level of neatness and consistency in the finish• Little support in completing the project/job
<p>(c) Weightage in the range of above 90% to be allotted during assessment</p>	
<p>For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.</p>	<ul style="list-style-type: none">• High skill levels in the use of hand tools, machine tools and workshop equipment• Above 80% tolerance dimension/accuracy achieved while undertaking different work with those demanded by the component/job/set standards.• A high level of neatness and consistency in the finish.• Minimal or no support in completing the project.

Brief description of Job roles:

Upholsterer; Furniture installs repairs or replaces upholstery of furniture. Removes old upholstery. Stretches and tacks new webbing to frame. Fastens springs by nailing them to frame and tying them to each other with cord. Covers springs with binding material, places cotton, rubber composition or other soft material over springs for padding, and then tacks another layer of binding material to secure padding. Cuts covering fabric to size and tacks it in place. Tacks braid over end of covering material to conceal rough edges. May replace damaged springs, may do minor repairs to broken wooden parts of furniture and may sew covering material.

Upholsterer, Vehicle installs covering and cushioning for seats and for other furnishings on motor cars, carts, railway coaches, aircrafts and other types of vehicles. Takes measurements for furnishings or works from drawings. Cuts out materials. Makes and fits springs, padding and covering to seats. Fits lining to roof, doors and other parts. Cuts out and fixes materials for excluding sounds and draughts. May lay floor covering and make and fit vehicle blinds and fabric roofs.

Cushion Maker; Cushion Stuffer; Cushion Mat Maker makes cushion covers and stuffs them with moss, hair, feather, coir jute or cotton. Cuts upholstery cloth according to size of cushion and sews pieces together, leaving opening at one end. Stuffs material into cushion and beats cushion with hand or stick to make packing even. Sew open end of cover and stitches piping along edges to preserved shape of cushion. May repair and rebuild cushions. May be designated as mattress maker if engaged in making mattresses.

Upholsterer and Related Workers, Other include all other upholsterers and related workers such as those engaged in cutting out or completely making curtains, pelmets, wall and furniture covers, quilts and other soft furnishings, not elsewhere classified.

Reference NCO-2015:

- i) 7534.0100 - Upholsterer, Furniture
- ii) 7534.0300 - Upholsterer, Vehicle
- iii) 7534.0400 - Cushion Maker
- iv) 7534.9900 - Upholsterers and Related Workers, Other

NSQF level for Upholsterer trade under ATS: **Level 4**

As per notification issued by Govt. of India dated- 27.12.2013 on National Skill Qualification Framework total 10 (Ten) Levels are defined.

Each level of the NSQF is associated with a set of descriptors made up of five outcome statements, which describe in general terms, the minimum knowledge, skills and attributes that a learner needs to acquire in order to be certified for that level.

Each level of the NSQF is described by a statement of learning outcomes in five domains, known as level descriptors. These five domains are:

- a. Process
- b. Professional knowledge,
- c. Professional skill,
- d. Core skill and
- e. Responsibility.



The Broad Learning outcome of Upholsterer trade under ATS mostly matches with the Level descriptor at Level- 4.

The NSQF level-4 descriptor is given below:

Level	Process Required	Professional Knowledge	Professional Skill	Core Skill	Responsibility
Level 4	Work in familiar, predictable, routine, situation of clear choice.	Factual knowledge of field of knowledge or study	Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts	Language to communicate written or oral, with required clarity, skill to basic Arithmetic and algebraic principles, basic understanding of social political and natural environment .	Responsibility for own work and learning.

5. GENERAL INFORMATION

Name of the Trade	UPHOLSTERER
NCO - 2015	7534.0100, 7534.0300, 7534.0400, 7534.9900
NSQF Level	Level – 4
Duration of Apprenticeship Training (Basic Training + On-Job Training)	Two years (02 Blocks each of one year duration).
Duration of Basic Training	a) Block – I : 3 months b) Block – II : 3 months Total duration of Basic Training: 6 months
Duration of On-Job Training	a) Block – I: 9 months b) Block – II : 9 months Total duration of Practical Training: 18 months
Entry Qualification	Pass in 8th class examination under 10+2 system of education or 2 classes below Matriculation examination or its equivalent.
Selection of Apprenticeship	The apprentices will be selected as per Apprenticeship Act amended time to time.
Instructors Qualification for Basic Training	As per ITI instructors qualifications as amended time to time for the specific trade.
Infrastructure for Basic Training	As per related Trade of ITI
Examination	The internal examination/ assessment will be held on completion of each block. Final examination for all subjects will be held at the end of course and same will be conducted by NCVT.
Rebate to Ex-ITI Trainees	01year
CTS trades eligible for Upholsterer Apprenticeship	1. Upholsterer 2. Leather Goods Maker

Note:

- Industry may impart training as per above time schedule for different block, however this is not fixed. The industry may adjust the duration of training considering the fact that all the components under the syllabus must be covered. However the flexibility should be given keeping in view that no safety aspects is compromised.
- For imparting Basic Training the industry to tie-up with ITIs having such specific trade and affiliated to NCVT.

6.1 GENERIC LEARNING OUTCOME

The following are minimum broad Common Occupational Skills/Generic Learning Outcome after completion of the Upholsterer course of 02 years duration under ATS.

Block I & II

1. Recognize & comply safe working practices, environment regulation and housekeeping.
2. Understand and explain different mathematical calculation & science in the field of study including basic electrical and apply in day to day work. *[Different mathematical calculation & science - Basic Mathematics, Material Science, Mass, Weight and Density, Calculation on the cost of manufacturing, repairing and renewing of various upholstery items etc.]*
3. Interpret specifications, different engineering drawing and apply for different application in the field of work. *[Different engineering drawing- free hand sketch of bolts, nuts, rivets, keys, screws etc., Drawing sectional views of geometrical solids, hollows and simple machine parts with dimensions as per IS 696 etc.]*
4. Select and ascertain measuring instrument and measure dimension of components and record data.
5. Explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality.
6. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources.
7. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth.
8. Plan and organize the work related to the occupation.

6.2 SPECIFIC LEARNING OUTCOME

Block – I

1. Familiarise with the workshop, safety, first aid and fire fighting.
2. Care and maintain tools, equipment and machineries used for the trade.
3. Perform Kit cutting, punching, edging, piecing and spacing.
4. Carry out stitching, hemming, patching, tacking etc. by hand.
5. Fit eyelets, buttons, rivet etc.
6. Split leather to desired thickness.
7. Lay out patterns and make templates for various designs of covers minimising wastage.
8. Sew leather and other covering materials by hand and with sewing machine.
9. Use P.V.C. welding machine and quilting machine for design work.

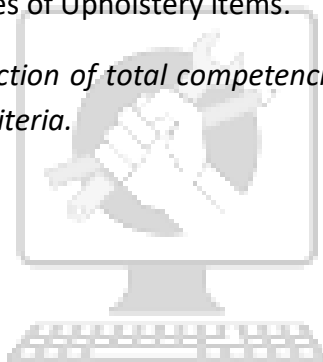
Upholsterer

10. Prepare wool, hair, coir, felt, foam etc. as stuffing materials.

Block – II

11. Repair and maintain sewing machines.
12. Make Arm Chair seats, V.I.P. and star shape, barrel back chair seats and Computer Operators chair seat and back cushion.
13. Make rolled arm sofa with special design, rolled settee seat with teapoy.
14. Prepare Upholstery items of Auto-rickshaws and cars.
15. Make Upholstery items of Trucks and Buses.
16. Prepare Upholstery items of Railway Coaches/Aeroplanes/Ships.
17. Inspect quality of products.
18. Repair and renew all types of Upholstery items.

Note: *Learning outcomes are reflection of total competencies of a trainee and assessment will be carried out as per assessment criteria.*



Skill India
कौशल भारत - कुशल भारत

7. LEARNING OUTCOME WITH ASSESSMENT CRITERIA

GENERIC LEARNING OUTCOME	
LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Recognize & comply safe working practices, environment regulation and housekeeping.	1.1 Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements.
	1.2 Recognize and report all unsafe situations according to site policy.
	1.3 Identify and take necessary precautions on fire and safety hazards and report according to site policy and procedures.
	1.4 Identify, handle and store / dispose off dangerous/unsalvageable goods and substances according to site policy and procedures following safety regulations and requirements.
	1.5 Identify and observe site policies and procedures in regard to illness or accident.
	1.6 Identify safety alarms accurately.
	1.7 Report supervisor/ Competent of authority in the event of accident or sickness of any staff and record accident details correctly according to site accident/injury procedures.
	1.8 Identify and observe site evacuation procedures according to site policy.
	1.9 Identify Personal Productive Equipment (PPE) and use the same as per related working environment.
	1.10 Identify basic first aid and use them under different circumstances.
	1.11 Identify different fire extinguisher and use the same as per requirement.
	1.12 Identify environmental pollution & contribute to avoidance of same.
	1.13 Take opportunities to use energy and materials in an environmentally friendly manner
	1.14 Avoid waste and dispose waste as per procedure
	1.15 Recognize different components of 5S and apply the same in the working environment.
2. Understand and explain different mathematical calculation & science in the field of study	2.1 Explain concept of basic science related to the field such as Material science - Properties of materials, Ferrous & non-ferrous metals, etc.
	2.2 Mass, weight, Density, Specific Gravity etc.

Upholsterer

including basic electrical and apply in day to day work. <i>[Different mathematical calculation & science - Basic Mathematics, Material Science, Mass, Weight and Density, Calculation on the cost of manufacturing, repairing and renewing of various upholstery items etc.]</i> .	2.3	Use scale/ tapes to measure as per specification.
	2.4	Calculate area / volume of the materials.
	2.5	Prepare list of appropriate materials by interpreting detail drawings and determine quantities of such materials.
	2.6	Ensure dimensional accuracy of assembly by using different instruments/gauges.
3. Interpret specifications, different engineering drawing and apply for different application in the field of work. <i>[Different engineering drawing- free hand sketch of bolts, nuts, rivets, keys, screws etc., Drawing sectional views of geometrical solids, hollows and simple machine parts with dimensions as per IS 696 etc.]</i> .	3.1	Read & interpret the information on drawings and apply in executing practical work.
	3.2	Read & analyse the specification to ascertain the material requirement, tools, and machining /assembly /maintenance parameters.
	3.3	Encounter drawings with missing/unspecified key information and make own calculations to fill in missing dimension/parameters to carry out the work.
4. Select and ascertain measuring instrument and measure dimension of components and record data.	4.1	Select appropriate measuring instruments as per tool list.
	4.2	Ascertain the functionality & correctness of the instrument.
	4.3	Measure dimension of the components & record data to analyse the with given drawing/measurement.
5. Explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality.	5.1	Explain the concept of productivity and quality tools and apply during execution of job.
	5.2	Understand the basic concept of labour welfare legislation and adhere to responsibilities and remain sensitive towards such laws.
	5.3	Knows benefits guaranteed under various acts.

Upholsterer

6. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources.	6.1 Explain the concept of energy conservation, global warming, pollution and utilize the available recourses optimally & remain sensitive to avoid environment pollution.
	6.2 Dispose waste following standard procedure.
7. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth.	7.1 Explain personnel finance and entrepreneurship.
	7.2 Explain role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programmes & procedure & the available scheme.
	7.3 Prepare Project report to become an entrepreneur for submission to financial institutions.
8. Plan and organize the work related to the occupation.	8.1 Use documents, drawings and recognize hazards in the work site.
	8.2 Plan workplace/ assembly location with due consideration to operational stipulation
	8.3 Communicate effectively with others and plan project tasks
	8.4 Assign roles and responsibilities of the co-trainees for execution of the task effectively and monitor the same.
SPECIFIC OUTCOME	
Block-I & II (Section:10 in the competency based curriculum)	
<p><i>Assessment Criteria i.e. the standard of performance, for each specific learning outcome mentioned under Block – I (section: 10) must ensure that the trainee works in familiar, predictable, routine, situation of clear choice. Assessment criteria should broadly cover the aspect of Planning (Identify, ascertain, etc.); Execution apply factual knowledge of field of knowledge, recall and demonstrate practical skill during performing the work in routine and repetitive in narrow range of application, using appropriate rule and tool, complying with basic arithmetic and algebraic principles and language to communicate in written or oral with required clarity; Checking/ Testing to ensure functionality during the assessment of each outcome. The assessments parameters must also ascertain that the candidate is responsible for his/her own work and learning.</i></p>	

BASIC TRAINING (Block – I)**Duration: (03) Three Months**

Week No.	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
1	Familiarize with the institute, workshop, sections. Safety rules, first-aid and fire fighting Practice.	Familiarization with the trade & its importance in the development of the country. Safety- Necessity, safety rules, First-Aid and Fire Fighting.
2	Identify and use of hand tools used for carpentry work of Upholstery items. Identification and use of measuring instruments used for carpentry work of Upholstery items.	<p>Vice- purpose, types, description, size and method to use. Use of vice clamps.</p> <p>Saw- purpose, types, description, size, setting of blades and method to use.</p> <p>Hammer- purpose, types, description, size and method to use.</p> <p>File- purpose, types, description, size and method to use. Pining and use of file card.</p> <p>Plane- purpose, types, description, size and method to use. Sharpening and setting of blade.</p> <p>Chisel- purpose, types, description, size and method to use. Sharpening of chisel.</p> <p>Purpose, types, description, size and method to use compass, divider, scribe and punch.</p> <p>Purpose, types, description and method to use rule, tape, and caliper. Purpose, types, description and method to use of carpenters square, try square and set square.</p> <p>Purpose, types, description and method to use of drills drill chuck and bench drilling machine.</p>
3	Identify and use of hand tools used for sheet metal work of Upholstery items. Lay out of simple patterns from sheets of various thicknesses. Cutting, filing, drilling, bending, folding and making joints of metal	Purpose, types, description and method to use hand tools for sheet metal work such as plier, snip, stake, punch. Description and method to use hand shear and guillotine shear for sheet metal work. Laying out of patterns- Types and procedure to be followed. Purpose, types and procedure for beading, flanging and making various joints of metal

Upholsterer

	sheets of various thicknesses.	sheet.
4	<p>Riveting of metal sheets. Cutting, filing, drilling and bending of flats, angles and pipes used for Upholstery items.</p> <p>Identify and use of equipments used for Upholstery work such as stone, wooden block and clamp.</p> <p>Drafting and cutting of paper patterns.</p>	<p>Rivets & Riveting</p> <p>Purpose, types, description of rivet. Procedure to riveting metal sheets. Procedure to be followed to bend flats, angles and pipes.</p> <p>Purpose, types, description and method to use stone, wooden block and clamp etc.</p> <p>Hide and Skin- Structure quality, defects and their uses.</p>
5-6	<p>Identify leather and its substitutes for their qualities and substitutes for different upholstery work.</p> <p>Identify and use of cutters used for cutting leather, its substitutes and stuffing material.</p> <p>Identify and use of hand tools used for making patterns of leather and its substitutes.</p>	<p>Leather and its substitutes used for upholstery work-types, characteristics, identification and their uses.</p> <p>Purpose, types, description and method to use scissor, knife, strap cutter etc. Parts and method to operate hand operated card board cutting devices.</p> <p>Purpose, types, description and method to use awl, pincer, creaser, ramps, punch etc.</p>
7	<p>Make pattern from leather and its substitutes.</p> <p>Make pattern from-</p> <ol style="list-style-type: none"> Natural material- cotton, jute, coir, silk etc. Synthetic material- Rexin, foam, P.V.C. sheet etc. 	<p>Leather-</p> <p>Name, qualities, application, limitation and treatment of skins used.</p> <p>Effects of water, acids, alkalis, friction and heat on leather and its substitutes.</p> <p>Fabrics-</p> <p>Distinguishing features and commercial forms. Selection and use of fabrics for upholstery work. Overview of blending, carding, spinning, twisting and weaving.</p>
8-11	<p>Make hems, seams, tacks, button holes, pleats, corners etc. by hand stitching on fabrics.</p> <p>Strap cutting, stamping, stapling, edge folding, eyelet setting and zig-zag stitching.</p> <p>Stitch patterns of cotton silk, rexin, canvas, leather etc by sewing machine.</p>	<p>Preparation of fabrics for upholstery work by piecing, spacing, stitching, hemming, patching etc. by hand. Procedure to be followed. Use of French curves.</p> <p>Preparation of fabrics for upholstery work-parts and method of using strap cutting, stamping die, stapling, edge folding, eyelet setter with die and zig-zag stitching machines. Care and maintenance of the machines.</p> <p>Sewing machine- types, description, method to operate for various functions, care and maintenance. Threads- types and uses. Description and method to use tools and equipment used.</p>
12	Kit cutting, skiving, folding, punching etc. in making leather items, such as	Description and use of fasteners, hinges, buckles, eyelets, buttons and rivets for

Upholsterer

	Purse, Map case, binocular case etc. Make canvas articles such as seat covers, cushion covers, etc.	upholstery work. Description and use of ladies magnetic hammer & Philips screw driver set. Parts and method to operate skiving machine. Glues and adhesives- types, properties, preparation and method to use. Covering materials- Types, description and method to use stuffing materials like cotton wool, hair, coir, felt, foam etc. Method for lashing spring covering, studding and finishing upholstery items.
13	Assessment/ Examination 03days	

Note: - More emphasis to be given on video/real-life pictures during theoretical classes. Some real-life pictures/videos of related industry operations may be shown to the trainees to give a feel of Industry and their future assignment.



Skill India
कौशल भारत - कुशल भारत

BASIC TRAINING (Block – II)

Duration: (03) Three Months

Week No.	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
1-3	Design of upholstery items with P.V.C welding machine and quality machine.	P.V.C. welding machine -Description, method to operate, care and maintenance. Quality Machine - Description, method to operate for various functions, care and maintenance. Purpose and method to design upholstery items.
4-5	Upholstering of chair, stool, foot rest, including preparation of the structure, lashing of spring, stuffing, covering, finishing. Estimation of materials.	Procedure to be followed for upholstering of sofa set & couch- Method to prepare base, use of stuffing material lashig of spring, covering, studding and finishing
6-8	Preparebase using stuffing materials & spring, fixing, webbing, canvassing, covering, studding & finishing sofa set and couch.	Method to prepare base, use of stuffing, fixing, webbing, canvassing, covering and finishing sofa set and couch.
9-10	Modeling, embossing, thronging, designing and coloring on leather.	Purpose and method to use modeling tool set. Artistic leather work- purpose and method for embossing, thronging, designing and coloring by hand.
11-12	Make 2 deck & 3 deck cushion love seat sofa with removable back cushion. Inspecting and preserving quality products.	Identification of the defects and method to repair chair, sofa and couch using old and new materials. Ecological considerations- Use of eco-friendly materials.
13	Assessment/Examination 03 days	

Note: - More emphasis to be given on video/real-life pictures during theoretical classes. Some real-life pictures/videos of related industry operations may be shown to the trainees to give a feel of Industry and their future assignment.

9.1 WORKSHOP CALCULATION SCIENCE & ENGINEERING DRAWING

Block – I		
Sl. No.	Workshop Calculation and Science (Duration: - 20 hrs.)	Engineering Drawing (Duration: - 30 hrs.)
1.	Units- Introduction, systems-MKS & SI, fundamental and derived. Mega, Kilo, Mili, Micro etc.-meaning, relation. Shop Problems.	Drawing free hand sketch of bolts, nuts, rivets, keys, screws etc. as per given drawing.
2.	Matter, mass, density and specific gravity-Definition, interrelation and simple calculation. States of matter.	Drawing orthographic views of simple solids like rectangular blocks, hexagonal bars, hollow bar, square bar, stepped block and geometrical figures as per given objects.
3.	Scalar and vector quantity- Meaning, difference and use.	Drawing freehand views of simple solids like rectangular blocks, hexagonal bars, hollow bar, square bar, stepped block and other geometrical figures from given pictorial drawing.
4.	Motion, rest, speed, velocity, acceleration, momentum- Definition, type, unit and related calculations.	Drawing simple isometric views from given objects.
5.	Newton's Law of motion- statement, illustration, explanation and application.	-----
6.	Gravity, acceleration due to gravity (g), weight, centre of gravity- Meaning and related calculations.	-----
7.	Work, Power, Energy- Definition, explanation, units (HP, Watt, Joule etc.) and related calculations.	-----
8.	Moment of force- Introduction, Principle, Direction and applications.	-----
9.	Simple machine, mechanical advantage, velocity ratio, efficiency- Introduction, description, use & related calculations.	-----
10.	Heat & Temperature- Introduction, Measurement of Temperature scale, unit etc. Transmission of heat- Different methods and their difference, examples.	-----

Block – II		
Sl. No.	Workshop Calculation and Science (Duration: - 20 hrs.)	Engineering Drawing (Duration: - 30 hrs.)
1.	Stress & strain- Meaning, type & importance.	Drawing free hand isometric sketches of simple geometrical solids, hollow bodies & simple machine parts from given orthographic views & vice versa.
2.	Electricity- Introduction, effects, application, positive and negative terminals, conductor, semi-conductor, non-conductor, fuse, switch.	Drawing free hand views and machine parts with dimensions as per given drawings.
3.	Pythagorean proposition.	Developing surface as per given drawings and given upholstery items.
4.	Quadrilaterals- Concepts, Rectangle, Square, Rhombos, Parallelogram, Trapezium and their basic properties. Shop problems.	Drawing sectional views of geometrical solids, hollows and simple machine parts with dimensions as per IS 696.
5.	Circle- Radius, diameter, centre, circumference, arc, chord, sector and segment. Shop problems.	Reading, interpreting and plasticising engineering drawing for identification of surfaces & edges, missing lines, missing views, missing dimensions etc.
6.	Factors and different types of factorisation containing two unknown quantities.	-----
7.	Equation- Simple and simple simultaneous equation containing two unknown quantities.	-----
8.	Surface area and volume of cube, rectangular parallelepiped cone, cylinder, sphere and annular ring. Shop problems.	-----
9.	Abscissa and ordinate, Graph of straight line related to two sets of varying quantities of first order. Shop problems.	-----
10.	Calculation on the cost of manufacturing, repairing and renewing of various upholstery items.	-----

9.2 EMPLOYABILITY SKILLS

(DURATION: - 110 HRS.)

Block – I (Duration – 55 hrs.)	
1. English Literacy	
Duration : 20 Hrs. Marks : 09	
Pronunciation	Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)
Functional Grammar	Transformation of sentences, Voice change, Change of tense, Spellings.
Reading	Reading and understanding simple sentences about self, work and environment
Writing	Construction of simple sentences Writing simple English
Speaking / Spoken English	Speaking with preparation on self, on family, on friends/ classmates, on know, picture reading gain confidence through role-playing and discussions on current happening job description, asking about someone's job habitual actions. Cardinal (fundamental) numbers ordinal numbers. Taking messages, passing messages on and filling in message forms Greeting and introductions office hospitality, Resumes or curriculum vita essential parts, letters of application reference to previous communication.
2. I.T. Literacy	
Duration : 20 Hrs. Marks : 09	
Basics of Computer	Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.
Computer Operating System	Basics of Operating System, WINDOWS, The user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc, Use of Common applications.
Word processing and Worksheet	Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion & creation of Tables. Printing document. Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets.
Computer Networking	Basic of computer Networks (using real life examples), Definitions of

Upholsterer

and Internet	Local Area Network (LAN), Wide Area Network (WAN), Internet, Concept of Internet (Network of Networks), Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication. Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT - ACT, types of cyber crimes.
3. Communication Skills	
	Duration : 15 Hrs. Marks : 07
Introduction to Communication Skills	Communication and its importance Principles of Effective communication Types of communication - verbal, non verbal, written, email, talking on phone. Non verbal communication -characteristics, components-Para-language Body language Barriers to communication and dealing with barriers. Handling nervousness/ discomfort.
Listening Skills	Listening-hearing and listening, effective listening, barriers to effective listening guidelines for effective listening. Triple- A Listening - Attitude, Attention & Adjustment. Active Listening Skills.
Motivational Training	Characteristics Essential to Achieving Success. The Power of Positive Attitude. Self awareness Importance of Commitment Ethics and Values Ways to Motivate Oneself Personal Goal setting and Employability Planning.
Facing Interviews	Manners, Etiquettes, Dress code for an interview Do's & Don'ts for an interview.
Behavioral Skills	Problem Solving Confidence Building Attitude
Block – II	
Duration – 55 hrs.	
4. Entrepreneurship Skills	
	Duration : 15 Hrs. Marks : 06
Concept of Entrepreneurship	Entrepreneur - Entrepreneurship - Enterprises:-Conceptual issue Entrepreneurship vs. management, Entrepreneurial motivation.

Upholsterer

	Performance & Record, Role & Function of entrepreneurs in relation to the enterprise & relation to the economy, Source of business ideas, Entrepreneurial opportunities, The process of setting up a business.
Project Preparation & Marketing analysis	Qualities of a good Entrepreneur, SWOT and Risk Analysis. Concept & application of PLC, Sales & distribution Management. Different Between Small Scale & Large Scale Business, Market Survey, Method of marketing, Publicity and advertisement, Marketing Mix.
Institutions Support	Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programmes & procedure & the available scheme.
Investment Procurement	Project formation, Feasibility, Legal formalities i.e., Shop Act, Estimation & Costing, Investment procedure - Loan procurement - Banking Processes.
5. Productivity	
	Duration : 10 Hrs. Marks : 05
Benefits	Personal / Workman - Incentive, Production linked Bonus, Improvement in living standard.
Affecting Factors	Skills, Working Aids, Automation, Environment, Motivation - How improves or slows down.
Comparison with developed countries	Comparative productivity in developed countries (viz. Germany, Japan and Australia) in selected industries e.g. Manufacturing, Steel, Mining, Construction etc. Living standards of those countries, wages.
Personal Finance Management	Banking processes, Handling ATM, KYC registration, safe cash handling, Personal risk and Insurance.
6. Occupational Safety, Health and Environment Education	
	Duration : 15 Hrs. Marks : 06
Safety & Health	Introduction to Occupational Safety and Health importance of safety and health at workplace.
Occupational Hazards	Basic Hazards, Chemical Hazards, Vibro acoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention.
Accident & safety	Basic principles for protective equipment. Accident Prevention techniques - control of accidents and safety measures.

Upholsterer

First Aid	Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person.
Basic Provisions	Idea of basic provision legislation of India. safety, health, welfare under legislative of India.
Ecosystem	Introduction to Environment. Relationship between Society and Environment, Ecosystem and Factors causing imbalance.
Pollution	Pollution and pollutants including liquid, gaseous, solid and hazardous waste.
Energy Conservation	Conservation of Energy, re-use and recycle.
Global warming	Global warming, climate change and Ozone layer depletion.
Ground Water	Hydrological cycle, ground and surface water, Conservation and Harvesting of water.
Environment	Right attitude towards environment, Maintenance of in -house environment.
7. Labour Welfare Legislation	
Duration : 05 Hrs. Marks : 03	
Welfare Acts	Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's compensation Act.
8. Quality Tools	
Duration : 10 Hrs. Marks : 05	
Quality Consciousness	Meaning of quality, Quality characteristic.
Quality Circles	Definition, Advantage of small group activity, objectives of quality Circle, Roles and function of Quality Circles in Organization, Operation of Quality circle. Approaches to starting Quality Circles, Steps for continuation Quality Circles.
Quality Management System	Idea of ISO 9000 and BIS systems and its importance in maintaining qualities.
House Keeping	Purpose of House-keeping, Practice of good Housekeeping.
Quality Tools	Basic quality tools with a few examples.

10. DETAILS OF COMPETENCIES (ON-JOB TRAINING)

The **competencies/ specific outcomes** on completion of On-Job Training are detailed below: -

Block – I

1. Familiarise with the workshop, safety, first aid and fire fighting.
2. Care and maintain tools, equipment and machineries used for the trade.
3. Perform Kit cutting, punching, edging, piecing and spacing.
4. Carry out stitching, hemming, patching, tacking etc. by hand.
5. Fit eyelets, buttons, rivet etc.
6. Split leather to desired thickness.
7. Lay out patterns and make templates for various designs of covers minimising wastage.
8. Sew leather and other covering materials by hand and with sewing machine.
9. Use P.V.C. welding machine and quilting machine for design work.
10. Prepare wool, hair, coir, felt, foam etc. as stuffing materials.

Block – II

11. Repair and maintain sewing machines.
12. Make Arm Chair seats, V.I.P. and star shape, barrel back chair seats and Computer Operators chair seat and back cushion.
13. Make rolled arm sofa with special design, rolled settee seat with teapoy.
14. Prepare Upholstery items of Auto-rickshaws and cars.
15. Make Upholstery items of Trucks and Buses.
16. Prepare Upholstery items of Railway Coaches/Aeroplanes/Ships.
17. Inspect quality of products.
18. Repair and renew all types of Upholstery items.

Note:

1. Industry must ensure that above mentioned competencies are achieved by the trainees during their on job training.
2. In addition to above competencies/ outcomes industry may impart additional training relevant to the specific industry.

INFRASTRUCTURE FOR PROFESSIONAL SKILL & PROFESSIONAL KNOWLEDGE

UPHOLSTERER			
LIST OF TOOLS AND EQUIPMENT for Basic Training (For 20 Apprentices)			
Sl. no.	Name of the Tool & Equipments	Specification	Quantity
A. TRAINEES TOOL KIT			
1.	Steel Rule	300 mm.	21 Nos.
2.	Measuring Tape	3 Meters	21 Nos.
3.	Wooden clamp	Standard size	21 Nos.
4.	Set Square		21 Nos.
5.	Compass		21 Nos.
6.	Divider	200 mm.	21 Nos.
7.	Scissors	200 mm.	21 Nos.
8.	Scissors for cutting zig-zag	200 mm.	21 Nos.
9.	Mallet	Medium size	21 Nos.
10.	Hide faced hammer		21 Nos.
11.	Awls		21 Nos.
12.	Pincers		21 Nos.
13.	Iron creaser double		21 Nos.
14.	Wooden creaser double		21 Nos.
15.	Rampis		21 Nos.
16.	Curved Ramis		21 Nos.
17.	Cross pane hammer	250 gms.	21 Nos.
18.	Scriber	150 mm.	21 Nos.
19.	Punches	1,3,4	21 Nos.
20.	Ladies magnetic hammer		21 Nos.
B. LIST OF TOOLS & EQUIPMENT			
21.	Marble stone	400×400×100 mm.	21 Nos.
22.	Stone slab	400×400×100 mm.	08 Nos.
23.	Wooden block	300×300×100 mm.	21 Nos.
24.	Strap cutter	200 mm.	04 Nos.
25.	Hammer	Claw 250mm.	04 Nos.
26.	Plier combination	150 mm.	04 Nos.
27.	'C' clamp	150 mm.	04 Nos.
28.	Rule	Six fold, 1 meter (inch & mm.)	08 Nos.
29.	Marking knif	200 mm.	08 Nos.
30.	Carpenters square	200 mm	08 Nos.
31.	Square, bevel	250 mm.	04 Nos.

Upholsterer

32.	Carpenters marking gauge		08 Nos.
33.	Carpenters mortice gauge		04 Nos.
34.	Saw, hand	450 mm.	04 Nos.
35.	Saw, tenon	300 mm.	04 Nos.
36.	Plane, jack metal	335 mm. × 50 mm.	04 Nos.
37.	Plane, smoothing metal	200 mm. × 500 mm.	04 Nos.
38.	Chisel, firmer (bevel edge)	6 mm. × 20 mm.	04 Nos.
39.	Chisel, firmer (bevel edge)	6 mm. × 10 mm.	04 Nos.
40.	Chisel mortice	10 mm.	04 Nos.
41.	Spring caliper, inside	150 mm.	04 Nos.
42.	Spring caliper, outside	150 mm.	04 Nos.
43.	Trammel point with beam	600 mm.	04 Pairs.
44.	File, half round, rasp bastard	300 mm.	04 Nos.
45.	File, slim taper	150 mm.	04 Nos.
46.	Hand drill	6 mm. capacity	04 Nos.
47.	Ratchet brace	250 mm.	04 Nos.
48.	Breast drill	6 mm. capacity	02 Nos.
49.	Counter sink bit, rose type	12 mm.	04 Nos.
50.	Snip straight	200 mm.	04 Nos.
51.	'G' clamp	150 mm.	04 Nos.
52.	Carpenters vice	250 mm. jaws	08 Nos.
53.	Nail punch		04 Nos.
54.	Portable electric drill	6 mm. capacity	02 Nos.
55.	Wing divider		04 Nos.
56.	Centre punch	100 mm.	04 Nos.
57.	Spring divider	150 mm.	04 Nos.
58.	Wire gauge		04 Nos.
59.	Scriber	100 mm.	04 Nos.
60.	Stake round and bottom		04 Nos.
61.	Anvil face stake		04 Nos.
62.	Tinmans horse		02 Nos.
63.	Hammer peaning	with handle	04 Nos.
64.	Hammer creasing	with handle	04 Nos.
65.	Shear Tinmans	300 mm.	02 Nos.
66.	Hand shear universal	250 mm.	02 Nos.
67.	Punch round	4 mm.	02 Nos.
68.	Rivet set Snap and Doll combined	4 mm.	02 Nos.
69.	File half round smooth	200 mm.	04 Nos.
70.	File flat smooth	200 mm.	04 Nos.
71.	Hacksaw frame adjustable	300 mm.	04 Nos.
72.	Hand groover	4 mm.	02 Nos.
73.	Adjustable spanner	250 mm.	02 Nos.
74.	Pneumatic rivet gun		02 Nos.

Upholsterer

75.	Double end spanner	6 mm. to 32 mm.	02 Sets.
76.	Bossing mallet		04 Nos.
77.	Oil can pressure feed	500 ml.	02 Nos.
78.	Hand vice	50 mm.	04 Nos.
79.	Pin vice	No. 0	04 Nos.
80.	Round file 2nd cut	150 mm.	04 Nos.
81.	Triangular file smooth	150 mm.	04 Nos.
82.	Square file 2nd cut	150 mm.	04 Nos.
83.	Divider with scale	200 mm.	08 Nos.
84.	Punch set	No. 1 to 100	04 Sets.
85.	File flat rough	150 mm.	04 Nos.
86.	Cutting plier 150 mm.	150 mm.	04 Nos.
87.	Set of screw driver		04 Sets.
88.	Flat chisel	200 mm nose width	04 Nos.
89.	Punch (for punching hole in metal sheet/strip)	2 mm.	04 Nos.
90.	French curve set		04 Sets.
91.	Press (Iron)	Electric	04 Nos.
92.	Bench vice	100 mm	04 Nos.
93.	Phillips screw driver set		04 Sets.
94.	Modeling tool set		04 Sets.
C. LIST OF MACHINERY			
95.	Cardboard cutting machine hand operated		02 Nos.
96.	Swing machine single needle capacity, motorized (power operated)		01 No.
97.	PVC welding machine		01 No.
98.	Quality machine		01 No.
99.	Stamping die machine		01 No.
100.	Stapling machine table type		01 No.
101.	Roller		01 No.
102.	Eye letting machine		01 No.
103.	Skiving machine		01 No.
104.	Strap cutting machine		01 No.
105.	Edge folding machine		01 No.
106.	Zig-Zag sewing machine, flat bed, motorized		02 Nos.
107.	Screen Printing machine		01 No.
108.	Splitting machine upper		01 No.
109.	Splitting machine bottom		01 No.
D. WORKSHOP FURNITURE			
110.	Working desk	500×500 mm.	21 Nos.
111.	Trainees lockers		16 Nos.

Upholsterer

112.	Work benches	2400 mm. × 1200 mm.	04 Nos.
113.	Stool wooden high	750 mm.	16 Nos.
114.	Almirah		02 Nos.
115.	Instructors desk & chair		01 Set.
116.	Show case		01 No.



Skill India

कौशल भारत - कुशल भारत

**INFRASTRUCTURE FOR WORKSHOP CALCULATION & SCIENCE AND ENGINEERING
DRAWING**

TRADE: UPHOLSTERER

LIST OF TOOLS& EQUIPMENTS FOR - 20 APPRENTICES

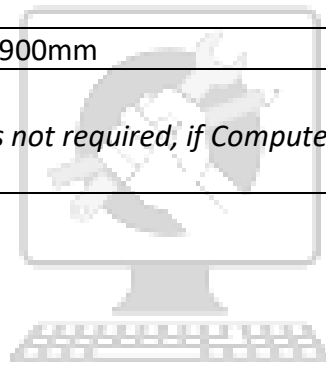
1) Space Norms : 45 Sq. m.(For Engineering Drawing)

2) Infrastructure:

A : TRAINEES TOOL KIT:-			
Sl. No.	Name of the items	Specification	Quantity
1.	Draughtsman drawing instrument box		21
2.	Set square celluloid 45°	(250 X 1.5 mm)	21
3.	Set square celluloid 30°-60°	(250 X 1.5 mm)	21
4.	Mini drafter		21
5.	Drawing board IS: 1444	(700mm x500 mm)	21
B : Furniture Required			
Sl. No.	Name of the items	Specification	Quantity
1	Drawing Board		21
2	Models : Solid & cut section		as required
3	Drawing Table for trainees		as required
4	Stool for trainees		as required
5	Cupboard (big)		01
6	White Board	(size: 8ft. x 4ft.)	01
7	Trainer's Table		01
8	Trainer's Chair		01

TOOLS & EQUIPMENTS FOR EMPLOYABILITY SKILLS		
Sl. No.	Name of the Equipment	Quantity
1.	Computer (PC) with latest configurations and Internet connection with standard operating system and standard word processor and worksheet software	10 Nos.
2.	UPS - 500VA	10 Nos.
3.	Scanner cum Printer	1 No.
4.	Computer Tables	10 Nos.
5.	Computer Chairs	20 Nos.
6.	LCD Projector	1 No.
7.	White Board 1200mm x 900mm	1 No.

Note: - Above Tools & Equipments not required, if Computer LAB is available in the institute.



Skill India
कौशल भारत - कुशल भारत

FORMAT FOR INTERNAL ASSESSMENT

Name & Address of the Assessor :						Year of Enrollment :								
Name & Address of ITI (Govt./Pvt.) :						Date of Assessment :								
Name & Address of the Industry :						Assessment location: Industry / ITI								
Trade Name :			Semester:			Duration of the Trade/course:								
Learning Outcome:														
Sl. No	Maximum Marks (Total 100 Marks)		15	5	10	5	10	10	5	10	15	15	Total internal assessment Marks	Result (Y/N)
	Candidate Name	Father's/Mother's Name	Safety consciousness	Workplace hygiene	Attendance/ Punctuality	Ability to follow Manuals/ Written instructions	Application of Knowledge	Skills to handle tools & equipment	Economical use of materials	Speed in doing work	Quality in workmanship	VIVA		
1														
2														