



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

**COMPETENCY BASED CURRICULUM**

# **SURFACE ORNAMENTATION TECHNIQUES (EMBROIDERY)**

(Duration: One Year)

**CRAFTSMEN TRAINING SCHEME (CTS)**

**NSQF LEVEL- 4**



**SECTOR –APPAREL**



Directorate General of Training

# **SURFACE ORNAMENTATION TECHNIQUES (EMBROIDERY)**

**(Non-Engineering Trade)**

**(Revised in 2019)**

**Version: 1.2**

**CRAFTSMEN TRAINING SCHEME (CTS)**

**NSQF LEVEL - 4**

Developed By

Ministry of Skill Development and Entrepreneurship

Directorate General of Training

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## 1. COURSE INFORMATION

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During the one-year duration of “Surface Ornamentation Techniques (Embroidery)” trade, a candidate is trained on Professional Skill, Professional Knowledge and Employability Skill related to job role. In addition to this, a candidate is entrusted to undertake project work, extracurricular activities and on-the-job training to build up confidence. The broad components covered under Professional Skill subject are as below:-

In the beginning the trainee learns to identify and use embroidery tools with safety precautions in order to prepare basic sample hand stitches (Temporary & permanent stitch); learns to describe & use different types of tracing method carbon paper, tissue paper, tracing paper, water soluble pen, tracing box (light box), hot pressing and wooden block method. He/she is able to demonstrate the basic embroidery stitches flat, loop, crossed, knotted and prepare article; draw, create & place free hand designs with Scribble, Geometrical, Cut Paper or Signature method; state & identify the color wheel, describe various types of color, color schemes & use these color schemes in different jobs, demonstrate the Enlarged & Reduced forms of design. The trainee also learns to decorate garment's part with a suitable Embroidery design; identify, operate the Zig-Zag machine embroidery parts, demonstrate set the machine for embroidery. make samples with running stitch, running shade, satin, cording, back stitch. Identification and rectification of defects; Decorate a cushion cover with embroidery design using Zig-Zag Machine.

Later the trainee is able to develop the different design for the garment components: sleeves yokes, neck, cuffs; prepare frame fitting for hand aari; demonstrate locking, starting and finishing of the aari chain stitch, with factual knowledge of different types of materials & stitches; prepare samples or coaster through straight, curved & sequence lines; decorate a sari by Hand aari method with sequence work; prepare the sample of drawn & pulled thread, Assisi, Cut, Swiss, shadow work with quality concepts. The trainee develops the skills to prepare the sample of phulkari of Punjab, kantha of Bengal, kasuti of Karnataka, chikankari of Lucknow, kashida of Kashmir, chamba of Himachal, kutch of Karnataka with quality concepts; prepare the sample of single and double cane weaving, fancy net with lazy daizy, cross stitch, circle and button hole network with quality concepts; prepare the sample of simple ,cut and felt applique work with quality concepts; lay out of frock, ladies kurta, gents kurta and toper. The trainee learns to estimate the costing of garments; develops various hand aari design with the help of accessories; recalls and prepare combination of zig-zag machine stitches and work style with the applique & satin, cording & stem, stem & satin, running & satin, shade & satin etc.

### 2.1 GENERAL

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

‘Surface Ornamentation Techniques (Embroidery)’ trade under CTS is one of the popular courses delivered nationwide through a network of ITIs. The course is of one year duration. It mainly consists of Domain area and Core area. The Domain area (Trade Theory & Practical) imparts professional skills and knowledge, while the core area (Employability Skill) imparts requisite core skills, knowledge, and life skills. After passing out the training program, the trainee is awarded National Trade Certificate (NTC) by DGT which is recognized worldwide.

#### **Trainee broadly need to demonstrate that they are able to:**

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

### 2.2 PROGRESSION PATHWAYS

- Can join industry as Craftsman and will progress further as Senior Craftsman, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.
- Can join Apprenticeship programs in different types of industries leading to a National Apprenticeship certificate (NAC).
- Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming an instructor in ITIs.
- Can join Advanced Diploma (Vocational) courses under DGT as applicable.

## 2.3 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of one year: -

S No.	Course Element	Notional Training Hours
1.	Professional Skill (Trade Practical)	1200
2.	Professional Knowledge (Trade Theory) & Soft Skills	240
3.	Employability Skills	160
	<b>Total</b>	<b>1600</b>

## 2.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The **Continuous Assessment** (Internal) during the period of training will be done by **Formative Assessment Method** by testing for assessment criteria listed against learning outcomes. The training institute has to maintain an individual trainee portfolio as detailed in assessment guideline. The marks of internal assessment will be as per the formative assessment template provided on [www.bharatskills.gov.in](http://www.bharatskills.gov.in).

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

### 2.4.1 PASS REGULATION

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50% weightage is applied to each examination for two years courses. The minimum pass percent for Trade Practical and Formative assessment is 60% & for all other subjects is 33%. There will be no Grace marks.

## 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 the assessment. Due consideration should be given while assessing for teamwork, avoidance/reduction of scrap/wastage and disposal of scrap/waste as per procedure, behavioral attitude, sensitivity to the 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 and records of internal (Formative) assessments to be preserved until forthcoming examination for audit and verification by examining body. The following marking pattern to be adopted while assessing:

Performance Level	Evidence
<b>(a) Weightage in the range of 60%-75% to be allotted during assessment</b>	
For performance in this grade, the candidate should produce work which demonstrates attainment of an acceptable standard of craftsmanship with occasional guidance, and due regard for safety procedures and practices	<ul style="list-style-type: none"> <li>• Demonstration of good skills and accuracy in the field of work/ assignments.</li> <li>• A fairly good level of neatness and consistency to accomplish job activities.</li> <li>• Occasional support in completing the task/ job.</li> </ul>
<b>(b) Weightage in the range of 75%-90% to be allotted during assessment</b>	
For this grade, a candidate should produce work which demonstrates attainment of a	<ul style="list-style-type: none"> <li>• Good skill levels and accuracy in the field of work/ assignments.</li> </ul>

<p>reasonable standard of craftsmanship, with little guidance, and regard for safety procedures and practices</p>	<ul style="list-style-type: none"> <li>• A good level of neatness and consistency to accomplish job activities.</li> <li>• Little support in completing the task/job.</li> </ul>
<p>(c) Weightage in the range of more than 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"> <li>• High skill levels and accuracy in the field of work/ assignments.</li> <li>• A high level of neatness and consistency to accomplish job activities.</li> <li>• Minimal or no support in completing the task/ job.</li> </ul>



### 3. JOB ROLE

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**Hand Embroiderer, General;**sews ornamental designs by hand over printed or stenciled patterns on cloth using needle and colored thread. Fastens embroidery hoop or frame over area of cloth to be worked to keep cloth taut while being embroidered. Threads needle with proper kind and color of thread, embroiders along or over lines of printed or stenciled design on cloth using knowledge of various types of stitches required.

**Framer-Computerized Embroidery Machine;**is responsible for preparation and setup of the embroidery machine for embroidery and carries out hooping and framing operations. The Framer is also responsible for removal of frame and fabric panel once the embroidery has been completed. While the embroidery is done through the computerized embroidery machine, the Framer needs to monitor the progress, and ensure the required quality of embroidery is achieved.

**Hand Embroiderer, Zari/Hand Embroider, Traditional Crafts;** sews ornamental designs by hand over stamped or stencilled patterns on fabric, using special embroidery material (zari) such as kora, kangani, sadi, nakshi, beads, tikli, sitare, etc. Stitches 'baithan' (cloth which forms base) to string loops of 'Karchob' or 'adda' (embroidery frame), adjusts 'Karchob' so that 'baithan' is evenly taut on all sides. Stitches,cotton, wool or silk fabric to work on 'baithan' in frame. Stencil design to be embroidered on fabric. Cuts zari material into pieces of required size with scissors. Threads needle with yarn and stitches neatly 'zari' pieces and beads etc., of proper size, colour and kind over stencilled design on fabric to make required pattern. Removes embroidered fabric from frame. May trace designs on fabric.

**Sewers, Embroiderers and Related Workers, Other;** Sewers, Embroiderers and Related Workers, Other include all other sewers, embroiderers and related workers engaged in other types of sewing and embroidery work, not elsewhere classified.

**Embroider, Machine;** embroiders various designs on fabric or garments by machines. Selects size and colour of thread and amounts bobbins of thread or machine. Threads needle and passes yarn through carrier of machine. Adjustsmachine for thread tension and type of stitch. Presses lever to raise needle and inserts material under it. Guides material or sewing arm of machine in accordance with drawing or outline or guide points of pantograph on enlarged design. Changes thread as required and replaces empty bobbins and broken needles. Removes article when embroidering is complete. Cleans and oils machine. May mark outlines of design on material before embroidery is started. May operate machine which embroiders several articles or designs at one time. May be designated as CROCHETING MACHINE OPERATOR if embroiders designs using crocheting machine.

**Embroidery Machine Operator (Zig Zag Machine);** Embroidery Machine Operator is responsible for operating the embroidery machine to embroider decorative designs on fabric/garments in the apparel industry. The Embroidery Machine Operator is able to perform different kinds of stitches and decorative work such as running shade work, cording and satin stitch, eyelet work, appliqué work, shade work and round, cutwork and open work, pin stitch and pitch stitch, china embroidery and fancy embroidery.

**Reference NCO- 2015:**

- (i) 7533.0201 – Hand Embroiderer, General
- (ii) 8153.0701 – Framer-Computerised Embroidery Machine Framer of a Computerized Embroidery Machine
- (iii) 7533.0300 – Hand Embroiderer, Zari/Hand Embroider, Traditional Crafts
- (iv) 7533.9900 – Sewers, Embroiderers and Related Workers, Other.
- (v) 8153.0500 – Embroider, Machine
- (vi) 8153.0601 – Embroidery Machine Operator (Zig Zag Machine)

## 4. GENERAL INFORMATION

<b>Name of the Trade</b>	<b>SURFACE ORNAMENTATION TECHNIQUES (EMBROIDERY)</b>
<b>Trade Code</b>	DGT/1025
<b>NCO – 2015</b>	7533.0201,8153.0701,7533.0300,7533.9900,8153.0500,8153.0601
<b>NSQF Level</b>	Level-4
<b>Duration of Craftsmen Training</b>	One Year (1600 Hours)
<b>Entry Qualification</b>	Passed 08 <sup>th</sup> Class examination
<b>Minimum Age</b>	14 years as on first day of academic session.
<b>Eligibility for PwD</b>	LD,CP,LC,DW,AA,LV,DEAF,HH,AUTISM,ID,SLD
<b>Unit Strength (No. of Student)</b>	20(There is no separate provision of supernumerary seats)
<b>Space Norms</b>	64 Sq. m
<b>Power Norms</b>	5 KW
<b>Instructors Qualification for:</b>	
<b>(i) Surface Ornamentation Techniques (Embroidery) Trade</b>	<p>B.Voc/Degree in Fashion &amp; apparel Technology from UGC recognized university/ college with one year experience in relevant field.</p> <p style="text-align: center;"><b>OR</b></p> <p>Diploma (Minimum 2 years)in Dress Making / Garment fabricating technology /costume designing from recognized Board of education or relevant Advanced Diploma (Vocational) from DGT with two years experiences in relevant field.</p> <p style="text-align: center;"><b>OR</b></p> <p>NTC/NAC passed in “Surface Ornamentation Techniques (Embroidery)” trade with three years’ experience in relevant field.</p> <p><b>Essential Qualification:</b> Relevant National Craft Instructor Certificate (NCIC) in any of the variants under DGT.</p>

	<p><b>Note:</b>  <i>Out of two Instructors required for the unit of 2(1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications. However, both of them must possess NCIC in any of its variants.</i></p>		
<b>(ii) Employability Skill</b>	<p>MBA/ BBA / Any Graduate/ Diploma in any discipline with Two years' experience with short term ToT Course in Employability Skills from DGT institutes.</p> <p>(Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above)  OR  Existing Social Studies Instructors in ITIs with short term ToT Course in Employability Skills from DGT institutes.</p>		
<b>(ii) Minimum Age for Instructor</b>	21 Years		
<b>List of Tools and Equipment</b>	As per Annexure – I		
<b>Distribution of training on hourly basis: (Indicative only)</b>			
<b>Total Hrs/ Week</b>	<b>Trade Practical</b>	<b>Trade Theory</b>	<b>Employability Skills</b>
40 Hours	30 Hours	6 Hours	4 Hours

## 5. LEARNING OUTCOME

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

### 5.1 LEARNING OUTCOMES (TRADE SPECIFIC)

1. Identify and use embroidery tools with safety precautions following safety precautions.
2. Prepare sample basic hand stitches (Temporary & permanent stitch).
3. Describe & use different types of tracing method carbon paper, tissue paper, tracing paper, water soluble pen, tracing box (light box), hot pressing and wooden block method.
4. Demonstrate the basic embroidery stitches flat, loop, crossed, knotted and prepare article.
5. Draw, create & place free hand designs with Scribble, Geometrical, Cut Paper or Signature method.
6. State & identify the colour wheel, describe various types of colour, colour schemes & use these colour schemes in different jobs.
7. Demonstrate the Enlarged & Reduced forms of design.
8. Decorate a garment part with a suitable Embroidery design.
9. Develop the different design for the garment components: sleeves yokes, neck, cuffs.
10. Identify, operate the Zig- Zag machine embroidery parts, demonstrate set the machine for embroidery.
11. Decorate a cushion cover with embroidery design using Zig-Zag Machine.
12. Make samples with running stitch, running shade, satin, cording, back stitch. Identification and rectification of defects.
13. Prepare frame fitting for hand aari.
14. Demonstrate locking, starting and finishing of the aari chain stitch, with factual knowledge of different types of materials & stitches.
15. Prepare samples or coaster through straight, curved & sequence lines.
16. Decorate a sari by Hand aari method with sequencework.
17. Prepare the sample of drawn & pulled thread, Assisi, Cut, Swiss, shadow work with quality concepts.
18. Prepare the sample of phulkari of Punjab, kantha of Bengal, kasuti of Karnataka, chikankari of Lucknow, kashida of Kashmir, chamba of Himachal, kutch of Karnataka with quality concepts.
19. Prepare the sample of single and double cane weaving, fancy net with lazy daizy, cross stitch, circle and button hole network with quality concepts.

20. Prepare the sample of simple, cut and felt applique work with quality concepts
21. Prepare Layout of frock, ladies kurta, gents kurta, toper and place them on article.
22. Carry out estimation and costing of garments.
23. Practice of different hand aari stitches.
24. Develop various hand aari design with the help of accessories.
25. Recall and prepare combination of zig-zag machine stitches and work style with the applique & satin, cording & stem, stem & satin, running & satin, shade & satin.

## 7. ASSESSMENT CRITERIA

LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Identify and use embroidery tools with safety precautions following safety precautions.	Identify embroidery tools.
	Identify all parts of equipment and their accessories.
	Clean all parts of equipment.
	Plan and operate.
	Identify basic faults and correct.
	Safety and maintenance.
2. Prepare sample basic hand stitches (Temporary & permanent stitch).	Identify and use the embroidery tools with safely.
	Select raw material for Temporary & permanent basic hand stitches.
	Prepare sample of Temporary stitches such as basting even, basting uneven, diagonal, slip basting.
	Prepare sample of permanent stitches such as running, hemming, slip, run & back, over casting.
	Explain difference between Temporary & Permanent stitch.
	Check sample properly finished and pressed.
3. Describe & use different types of tracing method carbon paper, tissue paper, tracing paper, water soluble pen, tracing box (light box), hot pressing and wooden block method	Identify and use the Pressing and Embroidery tools with safety
	Select raw material, tools and equipment for tracing method.
	Explain different types of tracing method such as carbon paper, tissue paper, tracing paper, water soluble pen, tracing box (light box), hot pressing and wooden block method.
	Demonstrate all method of tracing on different fabric with safety.
4. Demonstrate the basic embroidery stitches flat, loop, crossed, knotted & prepare article.	Select the thread with suitable color and quality for patching.
	Finish neatly the darned or patched piece.
	Identify and use the Drawing, Pressing and Embroidery tools with safety.
	Select suitable raw materials for the product different stitch flat, loop, crossed and knotted.
	Prepare napkin of types flat stitch such as running, back, stem, darning, Holbein, etc.

	Prepare coasters cover of types loop stitch such as chain, lazy-daisy, cable chain, magic chain, whipped etc.
	Prepare apron used types of crossed stitches.
	Prepare handkerchief used types of knotted stitch such as French, pistil, coral, bullion etc.
	Select Design suitable for article.
	Apply suitable colours to the design by following colour scheme.
	Decide the placement of the design in the fabric.
	Transfer the design on the fabric by selecting suitable transferring types.
	Fix the properly on the embroidery frame
	Select suitable Machine embroidery stitches for the design.
	Do the upper and lower threading of the machine.
	Start embroidery and complete the design step by step by applying suitable stitches at the required portions.
	Remove the frame and press the cushion cover neatly.
	Troubleshoot the machine whenever required following safety instructions.
5. Draw, create & place free hand designs with Scribble, Geometrical, Cut Paper or Signature method.	Make free hand drawing design with Scribble/ Geometrical/Cut Paper/Signature.
	Draw free hand design on handkerchief with Scribble/ Geometrical/Cut Paper/Signature.
6. State & identify the color wheel, describe various types of color, color schemes & use these color schemes in different jobs.	Explain color theory/color schemes.
	Apply various types of color schemes on given designs.
	Explain color wheel and apply concept of color combination.
7. Demonstrate the Enlarged & Reduced forms of design.	Enlarge the given design on the fabric.
	Reduce design forms as per given specifications.
	Place designs developing Border.



8. Decorate a garment part with a suitable Embroidery design.	Identify and use the drawing and Embroidery tools with safety.
	Select suitable raw materials for the product.
	Draw a Free Hand Design suitable for a Hand Kerchief in a Paper by following the elements of design.
	Apply suitable colours to the design by following colour scheme.
	Cut the fabric with the required size Press the fabric.
	Decide the placement of the design in the fabric.
	Enlarge/reduce the design according to the requirements.
	Transfer the design on the fabric by selecting suitable transferring types.
	Fix the fabric properly on the embroidery frame.
	Select suitable embroidery stitches for the design.
	Start embroidery and complete the design step by step by applying suitable stitches at the required portions.
	Remove the frame and trim the excess threads.
	Hem all sides of the fabric using permanent hand stitches.
	Press the handkerchief.
Follow the safety instructions throughout the process.	
9. Develop the different design for the garment components: sleeves yokes, neck, cuffs.	Identify and use the Drawing, Pressing and Embroidery tools with safety.
	Decide the features and placement of the design (Border, Spray, Corner, Center, Link, etc) suitable for the part of the garment (Sleeves, Yokes, Cuffs, Neck, etc).
	Draw the design using free hand in a Paper by following the elements of design.
	Apply suitable colours to the design by following colour scheme.
	Press the garment part. Transfer the design on the garment part by selecting suitable transferring types.
	Fix the garment part properly on the embroidery frame.
	Select suitable embroidery stitches for the design.
	Start embroidery and complete the design step by step by applying suitable stitches at the required portions.
	Remove the frame and trim the excess threads. Follow the safety instructions throughout the process.
10. Identify, operate the Zig-	Identify and select different parts of the zig zag machine.

Zag machine embroidery parts, demonstrate set the machine for embroidery.	Prepare and set the machine for embroidery.
	Fit the frames and operate the zig zag machine.
	Describe functions of zig zag machine embroidery parts.
	Trace and correct the defects of the zig zag machine.
11. Decorate a cushion cover with embroidery design using Zig Zag Machine	Identify and use the Drawing, Pressing and Embroidery tools with safety.
	Select Design suitable for a Cushion Cover in a Paper by following the elements of design.
	Apply suitable colours to the design by following colour scheme.
	Decide the placement of the design in the fabric.
	Transfer the design on the fabric by selecting suitable transferring types.
	Fix the cushion cover properly on the embroidery frame.
	Select suitable Machine embroidery stitches for the design.
	Do the upper and lower threading of the machine.
	Start embroidery and complete the design step by step by applying suitable stitches at the required portions.
	Remove the frame and press the cushion cover neatly.
	Troubleshoot the machine whenever required.
Follow the safety instructions throughout the process.	
12. Make samples with running stitch, running shade, satin, cording, back stitch. Identification and rectification of defects.	Set machines for embroidery of various stitching styles.
	Identify the defects and correct the problem traced.
	Make embroidery design on handkerchief with running stitch/satin stitch/back stitch/cording stitch.
	Apply running shade embroidery style on given garment.
13. Prepare frame fitting for hand aari.	Fit the frame for hand aari work and check for proper functioning.
	Explain the scope of application of hand Aari art.
	Select the material and stitches and demonstrate the use of in hand aari work.
14. Demonstrate locking, starting and finishing of the aari chain stitch, with	Straighten the fabric grain and test the stitch formation in the sewing machine.

factual knowledge of different types of materials & stitches.	
15. Prepare samples or coaster through straight, curved & sequence lines	Use proper sewing aids while sewing the garment & carryout the safe measures and needle guard policy while sewing.
	Use appropriate stitching techniques like single pointed darts/ plain seam/ continuous placket/ casing and decorative hem.
	Finish the stitching at the tuck end/ Press the tucks.
16. Decorate a sari by Hand aari method with sequence work	Identify and use the Drawing, Pressing and Hand Aari tools with safety.
	Draw a Free Hand Design suitable for a Sari aari work in a Paper by following the elements of design.
	Apply suitable colours to the design by following colour scheme.
	Decide the placement of the design in the Sari.
	Enlarge/reduce the design according to the requirements.
	Transfer the design on the fabric by selecting suitable transferring types.
	Press the sari and Fix the Sari properly on the Aari frame
	Start Aari embroidery and do the stitches with sequence materials.
	Complete the design step by step at the required portions.
	Remove the frame and trim the excess threads.
	Press the Sari.
Follow the safety instructions throughout the process.	
17. Prepare the sample of drawn & pulled thread, Assisi, Cut, Swiss, shadow work with quality concepts.	Select correct needles, frame, scissor & tracing method.
	Select suitable design, thread & fabric.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.
	Maintain safety aspects.
18. Prepare the sample of phulkari of Punjab, kantha of Bengal, kasuti of Karnataka, chikankari	Select correct needles, frame, scissor & tracing method.
	Select suitable design, thread & fabric.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.

of Luckhnow, kashida of Kashmir, chamba of Himachal, kutch of Karnataka with quality concepts.	Maintain safety aspects.
	Maintain quality as per requirement.
19. Prepare the sample of single and double cane weaving, fancy net with lazy daizy, cross stitch, circle and button hole net work with quality concepts.	Select correct needles, frame, scissor & tracing method.
	Select suitable design, thread & fabric.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.
	Maintain safety aspects.
20. Prepare the sample of simple, cut and felt applique work with quality concepts.	Select correct needles, frame, scissor & tracing method.
	Select suitable design, thread & fabric.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.
	Maintain safety aspects.
21. Prepare Layout of frock, ladies kurta, gents kurta, toper and place them on article.	Select specific size of frock, kurta, gents kurta & toper.
	Select suitable design of placement.
	Select appropriate placement of frock, kurta, gents kurta & toper.
	Maintain hygiene.
	Maintain safety aspects.
22. Carry out estimation and costing of garments.	Produce an estimate and cost sheet of garments.
	Prepare costing of given embroidered products.
23. Practice of different hand aari stitches.	Select correct needles, frame, scissor, equipment & tracing method.
	Select suitable design, thread & fabric.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.
	Maintain safety aspects.
	Maintain quality as per requirement.

24. Develop various hand aari design with the help of accessories.	Select correct needles, frame, scissor, equipment & tracing method.
	Select suitable design, thread, fabric & embellishment.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.
	Maintain safety aspects.
	Maintain quality as per requirement.
25. Recall and prepare combination of zig-zag machine stitches and work style with the appliqué& satin, cording & stem, stem & satin, running & satin, shade & satin.	Select correct needles, frame, scissor, equipment & tracing method.
	Select suitable design, thread, fabric & embellishment.
	Carryout embroidery work as per the design requirement.
	Maintain hygiene.
	Maintain safety aspects.
	Maintain quality as per requirement.

## 7. TRADE SYLLABUS

<b>SYLLABUS -SURFACE ORNAMENTATION TECHNIQUES (EMBROIDERY)</b>			
<b>DURATION: ONE YEAR</b>			
<b>Duration</b>	<b>Reference Learning Outcome</b>	<b>Professional Skills (Trade Practical) With Indicative Hours</b>	<b>Professional Knowledge (Trade Theory)</b>
Professional Skill 60Hrs;  Professional Knowledge 12 Hrs	Identify and use embroidery tools with safety precautions following safety precautions.	1. Safety Precautions to be followed in the Laboratory. (30 hrs)  2. Identification & Handling of trade related tools. (30 hrs)	Introduction and Familiarization with the institute.  Introduction to the trade Job prospects and objectives of the course.  Safety precautions to be followed in the lab. (06 hrs)  Knowledge of trade related tools. (06 hrs)
Professional Skill 30Hrs;  Professional Knowledge 06 Hrs	Prepare sample basic hand stitches (Temporary & permanent stitch).	3. Basic Hand Stitches. (30 hrs) a. Temporary Stiches <ul style="list-style-type: none"> <li>• Basting Even</li> <li>• Basting Uneven</li> <li>• Diagonal</li> <li>• Slip Basting</li> </ul> b. Permanent Stiches <ul style="list-style-type: none"> <li>• Running Stitches</li> <li>• Hemming</li> <li>• Slip Stitch</li> <li>• Run and back stitch</li> <li>• Over casting</li> <li>• Whip stitch</li> </ul>	Overview of embroidery and basic hand stitches. (06 hrs)
Professional Skill 30Hrs;	Describe & use different types of tracing method	4. Practice of Various Methods of –Transferring and Tracing Design. (20	Tracing Methods and Precautions used during Tracing

Professional Knowledge 06 Hrs	carbon paper, tissue paper, tracing paper, water soluble pen, tracing box (light box), hot pressing and wooden block method.	hrs) 5. Their Safety Precautions. (10 hrs)	Technical Terms Related To <ul style="list-style-type: none"> <li>• Design</li> <li>• Embroidery (06 hrs)</li> </ul>
Professional Skill 60Hrs;  Professional Knowledge 12 Hrs	Demonstrate the basic embroidery stitches flat, loop, crossed, knotted and prepare article.	6. Practice of Starting and Ending off of embroidery stitches –stitches. (30 hrs) 7. Sample Development of Basic embroidery stitches <ul style="list-style-type: none"> <li>• Flat Stitch</li> <li>• Loop Stitch</li> <li>• Crossed Stitches</li> <li>• Knotted Stitches (30 hrs)</li> </ul>	Basic Embroidery stitches(contemporary stiches) <ul style="list-style-type: none"> <li>• Flat Stitch</li> <li>• Loop Stitch</li> <li>• Crossed Stitches</li> <li>• Knotted Stitches (12 hrs)</li> </ul>
Professional Skill 60Hrs;  Professional Knowledge 12 Hrs	Draw, create & place free hand designs with Scribble, Geometrical, Cut Paper or Signature method.	8. Practice Of Free Hand Drawing Design (30 hrs) <ul style="list-style-type: none"> <li>• Scribble</li> <li>• Geometrical</li> <li>• Cut paper</li> <li>• Signature</li> </ul> 9. Make a Hand kerchief with a free hand (Scribble, Geometrical, Cut Paper or Signature) embroidery design. (30hrs)	Elements of Design Sources of Design Inspiration (12 hrs)
Professional Skill 60Hrs;  Professional Knowledge 12 Hrs	State & identify the color wheel, describe various types of color, color schemes & use these color schemes in different jobs.	10. Practical Exercise on <ul style="list-style-type: none"> <li>• Types of Color</li> <li>• Color Wheel</li> <li>• Color Schemes (60 hrs)</li> </ul>	<ul style="list-style-type: none"> <li>• Color Theory</li> <li>• Color wheel</li> <li>• Color schemes</li> <li>• Psychological aspects of color</li> <li>• Combining color (12 hrs)</li> </ul>

Professional Skill 30Hrs;  Professional Knowledge 06 Hrs	Demonstrate the Enlarged & Reduced forms of design.	11. Practice of Enlargement & Reduction of Designs.(30 hrs)	Enlargement & Reduction of Designs (06 hrs)
Professional Skill 30 Hrs;  Professional Knowledge 06 Hrs	Decorate a garment part with a suitable Embroidery design.	12. Practice of placing designs developing Border, Spray, Corner, Center, Link. (30 hrs)	Placement of Designs , Development of Borders, spray corners etc. (06 hrs)
Professional Skill 60Hrs;  Professional Knowledge 12 Hrs	Develop the different design for the garment components: sleeves yokes, neck, cuffs.	13. Develop designs for the garment components <ul style="list-style-type: none"> <li>• Sleeves</li> <li>• Yokes</li> <li>• Cuffs</li> <li>• Neck</li> </ul> (at least 10 designs using component template) (60 hrs)	Introduction to Drawing of designs(Border, Spray, Corner, Center, Link, etc ) and placement of the designs that is suitable for the parts of the garments (Sleeves, Yoke, Cuff, Neck). Placement of colour schemes and embroidery designs.(12 hrs)
Professional Skill 30Hrs;  Professional Knowledge 06 Hrs	Identify, operate the Zig- Zag machine embroidery parts, demonstrate set the machine for embroidery.	14. Frame fitting and its precautions. (30 hrs)	Introduction to various embroidery machines Introduction To Zig-Zag Machine <ul style="list-style-type: none"> <li>• Parts &amp; their functions</li> <li>• Defects and Remedies</li> <li>• Threading a Machine</li> <li>• Winding a Bobbin</li> <li>• Operations</li> </ul> (06 hrs)
Professional Skill 30Hrs;  Professional Knowledge 06 Hrs	Decorate a cushion cover with embroidery design using Zig-Zag Machine.	15. Practice of running Zig-Zag. (30 hrs)	Overview of operations and handling of Zig-Zag Machine. <ul style="list-style-type: none"> <li>• Parts &amp; their functions</li> <li>• Defects and Remedies</li> <li>• Threading a Machine</li> </ul>



			<ul style="list-style-type: none"> <li>Winding a Bobbin</li> </ul> <p>How to set the machine for embroidery. (06 hrs)</p>
<p>Professional Skill 30Hrs;  Professional Knowledge 06 Hrs</p>	<p>Make samples with running stitch, running shade, satin, cording, back stitch.  Identification and rectification of defects.</p>	<p>16. Machine Sample making of-</p> <ul style="list-style-type: none"> <li>Running Stitch</li> <li>Running Shade</li> <li>Satin Stitch</li> <li>Cording Stitch</li> <li>Back Stitch</li> </ul> <p>(30 hrs)</p>	<p>How to set the machine for embroidery with different varieties of stitches. (06 hrs)</p>
<p>Professional Skill 60Hrs;  Professional Knowledge 12 Hrs</p>	<p>Prepare frame fitting for hand aari.</p>	<p>17. Frame Fitting for Hand Aari. (60 hrs)</p>	<p>Introduction To Hand Ari</p> <ul style="list-style-type: none"> <li>Utilities and scope</li> <li>Material &amp; Stitches used in hand Ari.</li> </ul> <p>(12 hrs)</p>
<p>Professional Skill 30Hrs;  Professional Knowledge 06 Hrs</p>	<p>Demonstrate locking, starting and finishing of the aari chain stitch, with factual knowledge of different types of materials &amp; stitches.</p>	<p>18. Practicing of locking, starting and finishing of stitch. (30 hrs)</p>	<ul style="list-style-type: none"> <li>Stitch formation</li> <li>Process &amp; Techniques</li> <li>Finishing</li> <li>Sewing aids</li> </ul> <p>(06 hrs)</p>
<p>Professional Skill 30Hrs;  Professional Knowledge 06 Hrs</p>	<p>Prepare samples or coaster through straight, curved &amp; sequence lines.</p>	<p>19. Practice of Straight and Curve lines. (30 hrs)</p>	<ul style="list-style-type: none"> <li>Types and characteristics of sequence lines</li> <li>Guides</li> </ul> <p>(06 hrs)</p>
<p>Professional Skill 30Hrs;  Professional Knowledge</p>	<p>Decorate a sari by Hand aari method with sequence work.</p>	<p>20. Practice of fixing different sequences with aari. (30 hrs)</p>	<ul style="list-style-type: none"> <li>Utilities and scope</li> <li>Application of straight &amp; curved lines.</li> </ul> <p>(06 hrs)</p>

06 Hrs			
Professional Skill 120 Hrs;  Professional Knowledge 24 Hrs	Prepare the sample of drawn & pulled thread, Assisi, Cut, Swiss, shadow work with quality concepts.	21. Practice & sample making of the following Typical Embroideries –  <ul style="list-style-type: none"> <li>• Drawn and pulled thread work</li> <li>• Assisi Work</li> <li>• Cut Work</li> <li>• Swiss Work</li> <li>• Shadow Work (120 hrs)</li> </ul>	Introduction To Typical Embroidery-  <ul style="list-style-type: none"> <li>• Drawn and pulled thread work</li> <li>• Assisi Work</li> <li>• Cut Work</li> <li>• Swiss Work</li> <li>• Shadow Work (24 hrs)</li> </ul>
Professional Skill 120 Hrs;  Professional Knowledge 24 Hrs	Prepare the sample of phulkari of Punjab, kantha of Bengal, kasuti of Karnataka, chikankari of Lucknow, kashida of Kashmir, chamba of Himachal, kutch of Karnataka with quality concepts.	22. Practice & Sample making of the following traditional embroidery –  <ul style="list-style-type: none"> <li>• Phulkari</li> <li>• Kantha</li> <li>• Kasuti</li> <li>• Chikankari</li> <li>• Kashida</li> <li>• Chamba</li> <li>• Kutch (120 hrs)</li> </ul>	Introduction To Traditional Embroidery –  <ul style="list-style-type: none"> <li>• Phulkari</li> <li>• Kantha</li> <li>• Kasuti</li> <li>• Chikankari</li> <li>• Kashida</li> <li>• Chamba</li> <li>• Kutch (24 hrs)</li> </ul>
Professional Skill 60 Hrs;  Professional Knowledge 12 Hrs	Prepare the sample of single and double cane weaving, fancy net with lazy daizy, cross stitch, circle and button hole net work with quality concepts.	23. Practice of making samples of Fancy Nets. (30 hrs)  24. Cane weaving – Single & Double  <ul style="list-style-type: none"> <li>• Fancy net with lazy daisy</li> <li>• Fancy net with cross stitch</li> <li>• Fancy net with circles</li> <li>• Button hole net (30 hrs)</li> </ul>	Fancy Net work  <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Types</li> <li>• Use (12 hrs)</li> </ul>
Professional Skill 60 Hrs;	Prepare the sample of simple, cut and	25. Practice & sample making of the following –	Appliqué work  <ul style="list-style-type: none"> <li>• Introduction</li> </ul>

Professional Knowledge 12 Hrs	felt applique work with quality concepts.	<ul style="list-style-type: none"> <li>• Simple Applique</li> <li>• Cut Applique</li> <li>• Felt Applique (60 hrs)</li> </ul>	<ul style="list-style-type: none"> <li>• Type</li> <li>• Difference between Appliqué &amp; patch (12 hrs)</li> </ul>
Professional Skill 30 Hrs;  Professional Knowledge 06 Hrs	Prepare Layout of frock, ladies kurta, gents kurta, toper and place them on article.	26. Placement of Design on – <ul style="list-style-type: none"> <li>• Frock</li> <li>• Ladies Kurta</li> <li>• Gents Kurta</li> <li>• Topper (30 hrs)</li> </ul>	Marker planning for with the help of available patterns <ul style="list-style-type: none"> <li>• Frock</li> <li>• Ladies Kurta</li> <li>• Gents Kurta</li> <li>• Topper (06 hrs)</li> </ul>
Professional Skill 30 Hrs;  Professional Knowledge 06 Hrs	Carry out estimation and costing of garments.	27. Estimate costing of products. (30 hrs)	Estimation & Costing of Garment (06 hrs)
Professional Skill 30 Hrs;  Professional Knowledge 06 Hrs	Practice of different hand aari stitches.	28. Practice and design variation in Aari for - <ul style="list-style-type: none"> <li>• Basic Stitches</li> <li>• Mirror work (30 hrs)</li> </ul>	Accessories used in Embroidery (06 hrs)
Professional Skill 30 Hrs;  Professional Knowledge 06 Hrs	Develop various hand aari design with the help of accessories.	29. Practice and design variation in Aari using accessories for - <ul style="list-style-type: none"> <li>• Stone work</li> <li>• Metallic Thread Embroidery</li> <li>• Beads &amp; Sequins (30 hrs)</li> </ul>	Various types of accessories used in embroidery; Laundry of Embroidery articles stains – Classification & Removal (06 hrs)
Professional Skill 60 Hrs;  Professional Knowledge 12 Hrs	Recall and prepare combination of zig-zag machine stitches and work style with the applique & satin,	30. Combination of stitches and work styles with following stitches <ul style="list-style-type: none"> <li>• Appliqué and satin</li> <li>• Cording and stem</li> </ul>	Quality Control <ul style="list-style-type: none"> <li>• Definition, need &amp; Planning</li> <li>• Types of Inspection</li> <li>• Stages of Inspection (12 hrs)</li> </ul>

**Surface Ornamentation Techniques (Embroidery)**

	<p>ricing &amp; stem, stem &amp; satin, running &amp; satin, shade &amp; satin.</p>	<ul style="list-style-type: none"> <li>• Stem and satin</li> <li>• Running and satin</li> <li>• Shade and satin</li> </ul> <p>(30 hrs)</p> <p>31. About 4 samples shall be prepared, covering practice of different combination of stitches and work styles.</p> <p>(30 hrs)</p>	
<p><b>Project work:</b> Preparation of following garments using above said stitches(any two)</p> <ul style="list-style-type: none"> <li>• Frock</li> <li>• Ladies Kurta</li> <li>• Gents Kurta</li> <li>• Toper or Designer saree with a blouse using surface ornamentation techniques with two traditional embroideries.</li> </ul>			

## **SYLLABUS FOR CORE SKILLS**

1. Employability Skills ( Common for all trades) (160 hrs)

Learning outcomes, assessment criteria, syllabus and Tool List of Core Skills subjects which is common for a group of trades, provided separately in [www.bharatskills.gov.in](http://www.bharatskills.gov.in)

<b>List of Tools &amp; Equipment</b>			
<b>SURFACE ORNAMENTATION TECHNIQUES (EMBROIDERY) (for Batch of 20 Candidates)</b>			
<b>S No.</b>	<b>Name of the Tools and Equipment</b>	<b>Specification</b>	<b>Quantity</b>
<b>A. TRAINEES TOOL KIT</b>			
1.	Measuring Tape	150 cm	20 +1 Nos.
2.	Seam Ripper		20 +1 Nos.
3.	Wooden Circular Frame	4",8" and 12"	20 +1 Nos.
4.	Thimble		20 +1 Nos.
5.	Color Plate		20 +1 Nos.
6.	Color brush	No. 00,1, 2	20 +1 Nos.
7.	Water color Box	Set of 12	20 +1 Nos.
8.	Scale plastic	12"	20 +1 Nos.
9.	Compass		20 +1 Nos.
10.	Hand Aari Needle	Set of Three	20 +1 Nos.
<b>B. MACHINE LABORATORY</b>			
11.	Zig-zag Embroidery machine complete set		20 Nos.
12.	Stitching Machine (Motorized)		1 No.
13.	chair		20 Nos.
14.	Air Conditioner		As required.
15.	Pliers		4 Nos.
16.	Display Board		2 Nos.
17.	Table (for faculty)		1 No.
18.	Chair		2 Nos.
19.	Almirah		1 No.
20.	Vacuum cleaner		1 No.
21.	Automatic press		2 Nos.
22.	Pressing pad		1 No.
23.	Pigeon hole Almirah 10 lockers & separate locking arrangements for trainees		2 Nos.
24.	Locks for above pigeon hole		20 Nos.

25.	Low seated chair		20 Nos.
26.	Carpet	Size as required	1 No.
27.	Tracing Table		2 Nos.
28.	Cart Chop		2 Nos.
29.	Notice board		1 No.
<b>D. THEORY ROOM</b>			
30.	Single desks for trainees with arrangements of keeping Books etc.		21 Nos.
31.	Chairs		21 Nos.
32.	Faculty Table & Chair set		1 No.
33.	Computer	CPU: 32/64 Bit i3/i5/i7 or latest processor, Speed: 3 GHz or Higher. RAM:-4 GB DDR-III or Higher, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB Keyboard and Monitor (Min. 17 Inch.) Licensed Operating System and Antivirus compatible with trade related software.	1 No.
34.	UPS & multimedia projector		As required
35.	White Magnetic Board with Felt board & accessories		1 No.
36.	Display Board		2 Nos.
37.	Storage Almirah		1 No.
38.	Book Shelf		1 No.
39.	AC unit split type		As required
<b>Note:</b>			
<ol style="list-style-type: none"> <li>1. Trainees Tool kit may be treated as consumables in respect of trainees actually completing the course of one year duration.</li> <li>2. Experts from the Industry may be called for special lectures and demo's as and when required.</li> </ol>			

## ANNEXURE-II

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts, trainers of ITIs, NSTIs, faculties from universities and all others who contributed in revising the curriculum. Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

<b>List of Expert Members participated/ contributed for finalizing the course curriculum of Surface Ornamentation Techniques (Embroidery) trade</b>			
<b>S No.</b>	<b>Name &amp; Designation Sh./Mr./Ms.</b>	<b>Organization</b>	<b>Remarks</b>
1.	S. Venkatesh, Head HR & Admin	Raymond	Member
2.	Sanjeev Mohanty Managing Director	Bennetton India Pvt. Ltd., Gurgaon	Member
3.	Animesh Saxena	Udyog Vihar Industries Association, Gurgaon B-40, Phase 5, Udyog Vihar Gurgaon-122017	Member
4.	Dr. Darlie Koshy Director General and CEO	IAM & ATDC Apparel Export Promotion Council, Gurgaon	Chairman
5.	Arindam Das	National Institute of Fashion Technology, New Delhi	Member
6.	Dr. Kushal Sen, Professor	D/o Textile Technology IIT Delhi	Member
7.	Bhattacharya. G HOD Textiles Department	Institute for Textile Technology, Choudwar	Member
8.	Poonam Thakur Professor & Academic Head	NIIFT, Mohali	Member
9.	L.N. Meena, Lecturer	Arya Bhatt Polytechnic, Delhi	Member
10.	Prabhas Kashyap, General Manager- Planning & Production Co-ordination	Gokaldas Export Ltd., Bangalore	Member
11.	Bishwanath Ganguly	Madura Fashion & Retail, Aditya Birla Centre for Retail Excellence (A B C R E)	Member
12.	K. N. Chatterjee, HoD	The technological inst. of textile &	Member



	Fashion and Apparel Engineering	Sciences, Bhiwani, Haryana, INDIA-127021	
13.	Tapas Kumar Adhikari, Sr. Manager	Reliance Industries Ltd.	Member
14.	Vikas Verma, Asst. Vice President	Welspun India Ltd.	Member
15.	Navjot Walia, Vice President	Maral Overseas Ltd., Noida	Member
<b>Mentor</b>			
16.	R.P. Dhingra, Director (P)	DGT	Mentor

### ABBREVIATIONS

CTS	Craftsmen Training Scheme
ATS	Apprenticeship Training Scheme
CITS	Craft Instructor Training Scheme
DGT	Directorate General of Training
MSDE	Ministry of Skill Development and Entrepreneurship
NTC	National Trade Certificate
NAC	National Apprenticeship Certificate
NCIC	National Craft Instructor Certificate
LD	Locomotor Disability
CP	Cerebral Palsy
MD	Multiple Disabilities
LV	Low Vision
HH	Hard of Hearing
ID	Intellectual Disabilities
LC	Leprosy Cured
SLD	Specific Learning Disabilities
DW	Dwarfism
MI	Mental Illness
AA	Acid Attack
PwD	Person with disabilities

