SURFACE ORNAMENTATION TECHNIQUES (EMBROIDERY)

(NSQF Level - 3)

TRADE THEORY

SECTOR : APPAREL

(As per revised syllabus July 2022 - 1200hrs)

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Directorate General of Training

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

NATIONAL INSTRUCTIONAL MEDIA INSTITUTE, CHENNAI

Post Box No. 3142, CTI Campus, Guindy, Chennai - 600 032

Sector : **Apparel**

Duration : **1 Year**

Trade : **Surface Ornamentation Techniques (Embroidery) - Trade Theory - NSQF Level -3 (Revised 2022)**

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FOREWORD

The Government of India has set an ambitious target of imparting skills to 30 crores people, one out of every four Indians, by 2020 to help them secure jobs as part of the National Skills Development Policy. Industrial Training Institutes (ITIs) play a vital role in this process especially in terms of providing skilled manpower. Keeping this in mind, and for providing the current industry relevant skill training to Trainees, ITI syllabus has been recently updated with the help of Media Development Committee members of various stakeholders viz. Industries, Entrepreneurs, Academicians and representatives from ITIs.

The National Instructional Media Institute (NIMI), Chennai, has now come up with instructional material to suit the revised curriculum for **Surface Ornamentation Techniques (Embroidery) - Trade Theory -** in **Apparel Sector.** The NSQF Level - 3 (Revised 2022). Trade Practical will help the trainees to get an international equivalency standard where their skill proficiency and competency will be duly recognized across the globe and this will also increase the scope of recognition of prior learning. NSQF Level - 3 (Revised 2022) trainees will also get the opportunities to promote life long learning and skill development. I have no doubt that with NSQF Level - 3 (Revised 2022) the trainers and trainees of ITIs, and all stakeholders will derive maximum benefits from these Instructional Media Packages IMPs and that NIMI's effort will go a long way in improving the quality of Vocational training in the country.

The Executive Director & Staff of NIMI and members of Media Development Committee deserve appreciation for their contribution in bringing out this publication.

Jai Hind

Directorate General of Training
Ministry of Skill Development & Entrepreneruship
Government of India.

New Delhi - 110 001

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PREFACE

The National Instructional Media Institute (NIMI) was established in 1986 at Chennai by then Directorate General of Employment and Training (D.G.E & T), Ministry of Labour and Employment, (now under Directorate General of Training, Ministry of Skill Development and Entrepreneurship) Government of India, with technical assistance from the Govt. of Federal Republic of Germany. The prime objective of this Institute is to develop and provide instructional materials for various trades as per the prescribed syllabi under the Craftsman and Apprenticeship Training Schemes.

The instructional materials are created keeping in mind, the main objective of Vocational Training under NCVT/NAC in India, which is to help an individual to master skills to do a job. The instructional materials are generated in the form of Instructional Media Packages (IMPs). An IMP consists of Theory book, Practical book, Test and Assignment book, Instructor Guide, Audio Visual Aid (Wall charts and Transparencies) and other support materials.

The trade practical book consists of series of exercises to be completed by the trainees in the workshop. These exercises are designed to ensure that all the skills in the prescribed syllabus are covered. The trade theory book provides related theoretical knowledge required to enable the trainee to do a job. The test and assignments will enable the instructor to give assignments for the evaluation of the performance of a trainee. The wall charts and transparencies are unique, as they not only help the instructor to effectively present a topic but also help him to assess the trainee's understanding. The instructor guide enables the instructor to plan his schedule of instruction, plan the raw material requirements, day to day lessons and demonstrations.

IMPs also deals with the complex skills required to be developed for effective team work. Necessary care has also been taken to include important skill areas of allied trades as prescribed in the syllabus.

The availability of a complete Instructional Media Package in an institute helps both the trainer and management to impart effective training.

The IMPs are the outcome of collective efforts of the staff members of NIMI and the members of the Media Development Committees specially drawn from Public and Private sector industries, various training institutes under the Directorate General of Training (DGT), Government and Private ITIs.

NIMI would like to take this opportunity to convey sincere thanks to the Directors of Employment & Training of various State Governments, Training Departments of Industries both in the Public and Private sectors, Officers of DGT and DGT field institutes, proof readers, individual media developers and coordinators, but for whose active support NIMI would not have been able to bring out this materials.

Chennai - 600 032 **EXECUTIVE DIRECTOR**

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ACKNOWLEDGEMENT

National Instructional Media Institute (NIMI) sincerely acknowledges with thanks for the co-operation and contribution extended by the following Media Developers and their sponsoring organisation to bring out this IMP **(Trade Theory)** for the trade of **Surface Ornamentation Techniques (Embroidery) - Trade Theory -** in **Apparel** Sector for ITIs.

MEDIA DEVELOPMENT COMMITTEE MEMBERS

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Shri.Nirmalya Nath	_	Deputy Director of Training NIMI- Chennai - 32.
Shri. Subhankar Bhowmik	_	Assistant Manager, NIMI, Chennai - 32.

NIMI records its appreciation of the Data Entry, CAD, DTP Operators for their excellent and devoted services in the process of development of this Instructional Material.

NIMI also acknowledges with thanks, the invaluable efforts rendered by all other staff who have contributed for the development of this Instructional Material.

NIMI is grateful to all others who have directly or indirectly helped in developing this IMP.

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INTRODUCTION

TRADE PRACTICAL

The trade practical manual is intented to be used in workshop . It consists of a series of practical exercises to be completed by the trainees during the one year course of the **Surface Ornamentation Techniques (Embroidery)** in **Apparel** trade supplemented and supported by instructions/ informations to assist in performing the exercises. These exercises are designed to ensure that all the skills in compliance with NSQF LEVEL - 3 (Revised 2022)

The manual is divided into Ten modules.

Module 1	**-**	**Basic Hand Stitches & Decorative**
Module 2	**-**	**Element of Design and Development**
Module 3	**-**	**Zig - Zag Embroidery Machine Frame Fitting and its Precautions**
Module 4	**-**	**Aari Embroidery**
Module 5	**-**	**Typical Embroidery**
Module 6	**-**	**Traditional Embroidery**
Module 7	**-**	**Fancy Net & Applique work**
Module 8	**-**	**Placement of design**
Module 9	**-**	**Hand aari stitches**
Module 10	**-**	**Zig-Zag Machine Stitches and Dark Style**

The skill training in the shop floor is planned through a series of practical exercises centred around some practical project. However, there are few instances where the individual exercise does not form a part of project.

While developing the practical manual a sincere effort was made to prepare each exercise which will be easy to understand and carry out even by below average trainee. However the development team accept that there is a scope for further improvement. NIMI, looks forward to the suggestions from the experienced training faculty for improving the manual.

TRADE THEORY

The manual of trade theory consists of theoretical information for the one year course of the **Surface Ornamentation Techniques (Embroidery)** in **Apparel** Trade. The contents are sequenced according to the practical exercise contained in the manual on Trade practical. Attempt has been made to relate the theoretical aspects with the skill covered in each exercise to the extent possible. This co-relation is maintained to help the trainees to develop the perceptional capabilities for performing the skills.

The Trade theory has to be taught and learnt along with the corresponding exercise contained in the manual on trade practical. The indicating about the corresponding practical exercise are given in every sheet of this manual.

It will be preferable to teach/learn the trade theory connected to each exercise atleast one class before performing the related skills in the shop floor. The trade theory is to be treated as an integrated part of each exercise.

The material is not the purpose of self learning and should be considered as supplementary to class room instruction.

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LEARNING / ASSESSABLE OUTCOME

On completion of this book you shall be able to

S.No.	Learning Outcome	Ref. Ex.No.
1	**Identify and use embroidery tools with safety precautions following safety precautions. (NOS:AMH/NO102)**	1.1.01 - 1.1.02
2	**Prepare sample basic hand stitches (Temporary & permanent stitch). (NOS:AMH/N9407)**	1.1.03
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. (Mapped NOS: AMH/N1010)**	1.1.04 - 1.1.05
4	**Demonstrate the basic embroidery stitches flat, loop, crossed, knotted and prepare article. (Mapped NOS:AMH/N1010)**	1.1.06
5	**Draw, create & place free hand designs with Scribble, Geometrical, Cut Paper or Signature method. (Mapped NOS:AMH/NO801)**	1.2.07 - 1.2.08
6	**State & identify the color wheel, describe various types of color, color schemes & use these color schemes in different jobs. (Mapped NOS:AMH/N1010)**	1.2.09
7	**Demonstrate the Enlarged & Reduced forms of design.NOS-AMH/N9408**	1.2.10
8	**Decorate a garment part with a suitable Embroidery design. (Mapped NOS:AMH/N1011)**	1.2.11
9	**Develop the different design for the garment components: sleeves yokes, neck, cuffs. (Mapped NOS:AMH/N1011)**	1.2.12 - 1.2.13
10	**Identify, operate the Zig- Zag machine embroidery parts, demonstrate set the machine for embroidery. (Mapped NOS:AMH/NO801)**	1.3.14
11	**Decorate a cushion cover with embroidery design using Zig-Zag Machine. (Mapped NOS:AMH/NO801)**	1.3.15
12	**Make samples with running stitch, running shade, satin, cording, back stitch. Identification and rectification of defects. (Mapped NOS:AMH/N1011)**	1.3.16
13	**Prepare frame fitting for hand aari. (Mapped NOS:AMH/N1010)**	1.4.17
14	**Demonstrate locking, starting and finishing of the aari chain stitch, with factual knowledge of different types of materials & stitches. (Mapped NOS:AMH/NO801)**	1.4.18
15	**Prepare samples or coaster through straight, curved & sequence lines.**	1.4.19
16	**Decorate a sari by Hand aari method with sequence work. (Mapped NOS:AMH/NO801)**	1.4.20
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20	**Prepare the sample of simple, cut and felt applique work with quality concepts. (Mapped NOS:AMH/NO802)**	1.7.25
21	**Prepare Layout of frock, ladies kurta, gents kurta, toper and place them on article. (Mapped NOS:AMH/NO802)**	1.8.26
22	**Carry out estimation and costing of garments. (Mapped NOS:AMH/NO802)**	1.8.27
23	**Practice of different hand aari stitches. (Mapped NOS:AMH/NO802)**	1.9.28
24	**Develop various hand aari design with the help of accessories. (Mapped NOS:AMH/NO802)**	1.9.29
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. (Mapped NOS:AMH/NO802)**	1.10.30 - 31

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SYLLABUS

Duration	Reference Learning Outcome	Professional Skills (Trade Practical) with Indicative hours	Professional Knowledge (Trade Theory)
Professional Skill 30Hrs; Professional Knowledge 12Hrs)	Identify and use embroidery tools with safety precautions following safety precautions. (NOS:AMH/NO102)	1 Safety Precautions to be followed in the Laboratory. (15 hrs) 2. Identification & Handling of trade related tools. (15hrs)	Familiarization with the institute Introduction to the trade Job prospects and objectives of the course. Safety precautions to be followed in the lab. Knowledge of trade related tools. (12hrs)
Professional Skill 48Hrs; Professional Knowledge 06Hrs	Prepare sample basic hand stitches (Temporary & permanent stitch). (NOS:AMH/N9407)	3. Basic Hand Stitches. (30 hrs) a. Temporary Stiches • Basting Even • Basting Uneven • Diagonal • Slip Basting b. Permanent Stiches • Running Stitches • Hemming • Slip Stitch • Run and back stitch • Over casting • Whip stitch c. Practice of starting and ending off embroidery stitches • Frame fitting for embroidery and its precautions • Threading of hand needle (48hrs.)	Overview of embroidery and basic hand stitches. (06hrs)
Professional Skill 10Hrs; Professional Knowledge 06 Hrs)	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. (Mapped NOS: AMH/N1010)	4. Practice of Various Methods of - Transferring and Tracing Design. (07 hrs) 5. Their Safety Precautions. (03 hrs)	Tracing Methods and Precautions used during Tracing Technical Terms Related To • Design • Embroidery (06 hrs)
Professional Skill 30Hrs; Professional Knowledge 12Hrs	Demonstrate the basic embroidery stitches flat, loop, crossed, knotted and prepare article. (Mapped NOS:AMH/N1010)	6. Sample Development of Basic embroidery stitches • Flat Stitch • Loop Stitch • Crossed Stitches • Knotted Stitches (30 hrs) **Flat Stitches** • Running, stem, satin, back, shade work, hemming bone. **Looped Stitches:** • Chain , lazy-daisy, fly, feather blanket, button hole. **Knotted Stitches:** • French knot, coral knot, bullion, pistil stitch (Palestrina stitch) (30hrs.)	Basic Embroidery stitches (contemporary stiches) • Flat Stitch • Loop Stitch • Crossed Stitches • Knotted Stitches (12hrs)

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Duration	Reference Learning Outcome	Professional Skills (Trade Practical) with Indicative hours	Professional Knowledge (Trade Theory)
Professional Skill 60Hrs; Professional Knowledge 12Hrs	Draw, create & place free hand designs with Scribble, Geometrical, Cut Paper or Signature method. (Mapped NOS:AMH/NO801)	7. Practice Of Free Hand Drawing Design (30 hrs) • Scribble • Geometrical • Cut paper • Signature 8. 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 12Hrs	State & identify the color wheel, describe various types of color, color schemes & use these color schemes in different jobs. (Mapped NOS:AMH/N1010)	9. Practical Exercise on • Types of Color • Color Wheel • Color Schemes • Elements of designs • Principle of designs (60hrs.)	• Color Theory • Color wheel • Color schemes • Psychological aspects of color • Combining color (12hrs)
Professional Skill 06Hrs; Professional Knowledge 06Hrs	Demonstrate the Enlarged & Reduced forms of design.NOS-AMH/N9408	10. Practice of Enlargement & Reduction of Designs using of printer and scanner (06 hrs)	Enlargement & Reduction of Designs (06hrs)
Professional Skill 30Hrs; Professional Knowledge 06Hrs	Decorate a garment part with a suitable Embroidery design. (Mapped NOS:AMH/N1011)	11. 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 30Hrs; Professional Knowledge 12Hrs	Develop the different design for the garment components: sleeves yokes, neck, cuffs. (Mapped NOS:AMH/N1011)	12. Develop designs for the garment components • Sleeves • Yokes • Cuffs • Neck (at least 10 designs using component template)(60hrs) 13. Placing on different garments/ articles(30hrs.) • Cushions • Bed sheets • Wall hangings Using different embroidery stitches garments/ designs prepared during the session may be checked as per quality aspects and a report may be prepared for the same.	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 18Hrs; Professional Knowledge 06Hrs	Identify, operate the Zig-Zag machine embroidery parts, demonstrate set the machine for embroidery. (Mapped NOS:AMH/NO801)	14. Frame fitting and its precautions. (18 hrs)	Introduction to various embroidery machines Introduction To Zig-Zag Machine(06 hrs) • Parts & their functions • Defects and Remedies • Threading a Machine • Winding a Bobbin • Operations

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Duration	Reference Learning Outcome	Professional Skills (Trade Practical) with Indicative hours	Professional Knowledge (Trade Theory)
Professional Skill 30Hrs; Professional Knowledge 06Hrs	Decorate a cushion cover with embroidery design using Zig-Zag Machine. (Mapped NOS:AMH/ NO801)	15. Practice of running Zig-Zag stitches on different lines and shapes: Strait line(30hrs.) • Dotted line • Rounded levels • Pointed leaves • Diamond shape	Overview of operations and handling of Zig-Zag Machine. • Parts & their functions • Defects and Remedies • Threading a Machine • Winding a Bobbin How to set the machine for embroidery. (06hrs)
Professional Skill 30Hrs; Professional Knowledge 06Hrs	Make samples with running stitch, running shade, satin, cording, back stitch. Identification and rectification of defects. (Mapped NOS:AMH/ N1011)	16. Practice and sample development of zig-zag machine embroidery • Running Stitch • Running Shade • Satin Stitch • Cording Stitch • Back Stitch " Chain stitches • Filling stitches (30hrs.)	How to set the machine for embroidery with different varieties of stitches. (06hrs)
Professional Skill 30Hrs; Professional Knowledge 12Hrs	Prepare frame fitting for hand aari. (Mapped NOS:AMH/N1010)	17. Frame Fitting for Hand Aari. (30 hrs)	Introduction To Hand Ari • Utilities and scope • Material & Stitches used in hand Ari. (12hrs)
Professional Skill 30Hrs; Professional Knowledge 06Hrs	Demonstrate locking, starting and finishing of the aari chain stitch, with factual knowledge of different types of materials & stitches. (Mapped NOS:AMH/ NO801)	18. Practicing of locking, starting and finishing of stitch. (30 hrs)	• Stitch formation • Process & Techniques • Finishing • Sewing aids (06hrs)
Professional Skill 30Hrs; Professional Knowledge 06 Hrs	Prepare samples or coaster through straight, curved & sequence lines.	19. Practice and sample making of Aari embroidery basic stitches and its variations using silk thread and metallic thread: (30hrs.) • Chain stitch • Zigzag stitch • Chain with zigzag stitch • Water filling • Button hole stitch • Shade work • Flat loading (satin)	• Types and characteristics of se quence lines • Guides (06hrs)
Professional Skill 30Hrs; Professional Knowledge 06Hrs	Decorate a sari by Hand aari method with sequence work. (Mapped NOS:AMH/NO801)	20. Practice of fixing different sequences with aari. (30 hrs)	• Utilities and scope • Application of straight & curved lines. (06 hrs)
Professional Skill 60 hrs; Professional Knowledge 24Hrs	Prepare the sample of drawn & pulled thread, Assisi, Cut, Swiss, shadow work with quality concepts. (Mapped NOS:AMH/NO802	21. Practice & sample making of the following Typical Embroideries - • Drawn and pulled thread work • Assisi Work • Cut Work • Swiss Work • Shadow Work (60 hrs)	Introduction To Typical Embroidery- • Drawn and pulled thread work • Assisi Work • Cut Work • Swiss Work • Shadow Work (24 hrs)

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Duration	Reference Learning Outcome	Professional Skills (Trade Practical) with Indicative hours	Professional Knowledge (Trade Theory)
Professional Skill 60 Hrs. Professional Knowledge 24Hrs	Prepare the sample of phulkari of Punjab, kantha of Bengal, kasuti of Karnataka, chikankari of Luckhnow, kashida of Kashmir, chamba of Himachal, kutch of Karnataka with quality concepts. (Mapped NOS:AMH/NO802)	22. Practice & Sample making of the following traditional embroidery - • Phulkari • Kantha • Kasuti • Chikankari • Kashida • Chamba • Kutch (60hrs)	Introduction To Traditional Embroidery • Phulkari • Kantha • Kasuti • Chikankari • Kashida • Chamba • Kutch (24hrs)
Professional Skill 30 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. (Mapped NOS:AMH/NO80)	23. Practice of making samples of Fancy Nets. (10 hrs) 24. Cane weaving - Single & Double • Fancy net with lazy daisy • Fancy net with cross stitch • Fancy net with circles • Button hole net (20hrs)	Fancy Net work • Introduction • Types • Use (12hrs)
Professional Skill 30 Hrs; Professional Knowledge 12Hrs	Prepare the sample of simple, cut and felt applique work with quality concepts. (Mapped NOS:AMH/NO802)	25. Practice & sample making of the following - • Simple Applique • Cut Applique • Felt Applique (30 hrs)	Appliqué work • Introduction • Type • Difference between Appliqué & patch (12hrs)
Professional Skill 30 Hrs; Professional Knowledge 06Hrs	Prepare Layout of frock, ladies kurta, gents kurta, toper and place them on article. (Mapped NOS:AMH/NO802)	26. Placement of Design on - • Cushion covers • Pillow covers • Bed sheets • Kurties • Wall hanging (30 hrs)	Marker planning for with the help of available patterns Cushion covers • Pillow cover • Bed sheets • Kurties • Wall hanging (06 hrs)
Professional Skill 18 Hrs; Professional Knowledge 06Hrs	Carry out estimation and costing of garments. (Mapped NOS:AMH/NO802)	27. Estimate costing of products. (18 hrs)	Estimation & Costing of Garment (06 hrs)
Professional Skill 30 Hrs; Professional Knowledge 06Hrs	Practice of different hand aari stitches. (Mapped NOS:AMH/NO802)	28. Practice and design variation in Aari for - • Basic Stitches • Mirror work (30 hrs)	Accessories used in Embroidery (06 hrs)
Professional Skill 30 Hrs; Professional Knowledge 06Hrs	Develop various hand aari design with the help of accessories. (Mapped NOS:AMH/NO802)	29. Practice and design variation in Aari using accessories for - • Stone work • Metallic Thread Embroidery • Beads & Sequins (30 hrs)	Various types of accessories used in embroidery; Laundry of Embroidery articles stains - Classification & Removal (06hrs)
Professional Skill 50 Hrs; Professional Knowledge 12Hrs	Recall and prepare combination of zig- zag machine stitches and work style with the applique & satin, cording & stem, stem & satin,	30. Combination of stitches and work styles with following stitches " Appliqué and satin • Cording and stem • Stem and satin • Running and satin • Shade and satin (30 hrs)	Quality Control • Definition, need & Planning • Types of Inspection • Stages of Inspection (12hrs)

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Duration	Reference Learning Outcome	Professional Skills (Trade Practical) with Indicative hours	Professional Knowledge (Trade Theory)
	running & satin, shade & satin. (Mapped NOS:AMH/NO802)	31. About 4 samples shall be prepared, covering practice of different combination of stitches and work styles.(20 hrs)	

Project work:

Preparation of following garments using above said stitches (any two)

- Frock
- Ladies Kurta
- Gents Kurta
- Toper or Designer saree with a blouse using surface ornamentation techniques with two traditional embroideries.

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Introduction of Training Institute

Objectives: At the end of this lesson you shall be able to
- **provide detailed description of Industrial Training Institute**
- **explain about the structure of Training Institute**
- **describe the role of clothing**
- **explain the chances of success of this internship.**

Brief Introduction of Industrial Training Institute (ITIs)

Industrial Training Institute plays a vital role in the country's economy. It gives talented employees with important skills. The Directorate of General Training under the Ministry of Skills Development and Entrepreneurship provides training in various sectors of the economy and labour market. Our National Team (NCVT) selects and trains apprentices from the Vocational Training Divisions for the Craftsman Training Program (CTS) and Vocational Apprenticeship Program (ATS).

As of April 2016, there are 13105 (2293 Government Vocational Training Centers + 10812 Private Vocational Training Centers across India. Training is provided with one- or two-year courses in 132 professional extensions (engineering and non-engineering disciplines) . The minimum educational qualification requirement is pass mark to suit vocational groups in 8th, 10th and 12th standard, Admission to the training classes takes place in July each year.

The semester pattern for 6 months has been introduced in 2013 based on the revised syllabus according to the revised curriculum. Sector Mentor Council (SMC) has been introduced in 2014 for 11 sectors and 80 vocational groups according to the revised syllabus.

At the end of each semester, All India Trade Test is conducted through OMR system and Multiple-Choice system. The National Trade Certificate (NTC) is issued to the successful candidates by DGT. This certificate is globally recognized. The National Skill Qualification Framework (NSQF) which includes Level 4 and 5, was introduced and implemented in 2017 for certain sections.

After completing the training and obtaining the certificate, the trainees are required to undergo training in government and private institutions under the Apprenticeship Act 1961 for one or two years, depending on the profession. Apprentice Examination is conducted and Apprenticeship Certificate is issued. Job Opportunities are available in government and private companies in India and foreign countries. Professionals can start small businesses with government loans or on their own.

Organizational Structure of ITIs: The head of each Industrial Training Institute is the principal. Then, there are vice principal, training officer and team instructors. They are supervising officers. For each training section, there are Assistant Training Officer (ATO), Junior Training Officer (JTO) and Vocational Instructor (VI). Workshop Mathematics, Engineering map, Training Instructors, Executive officer, Accommodation Supervisor, Trainer, Physical Education Trainer (PET), Pharmacist, Librarian etc.

Role of clothes: Clothing is one of the basic necessities of human life next to food and shelter. There are three main functions of clothing.

Protection: Clothes cover naked or bare body of male and female. They protect the body from weather, injuries occur during work or other activities.

Decoration: Decoration also is one the functions of clothes. People wear different kind of clothes during various occasions. Daily wears or every day clothes are entirely differently from clothes worn during special occasions. We could recognize the ability of an individual by observing the dress they wear.

Identification: This function of clothes distinguishes people as a special group or a part of the society. National dress and uniform of police department or students' uniform are the best examples for this purpose.

Scope and Prospects of the trade: People started wearing stitched clothes i.e. smooth animal skin. Clothes and woven fabrics were made into folds and wrapped around the body. Stitched garments worn on the upper and lower part of the body make us aware of the need for cutting and sewing of woven fabric. The new fashion creates a lot of new clothes. Fashion shoes are being conducted around the world for new designs and clothes. Women's blouse and waistband are modernized according to the décor and shape. This shows the bright future of the different companies in the apparel industry. The apparel industry includes many activities.

Sewing clothes for the family at home and working in a tailoring shop is a fine work to cut the fabric to sew with pre-pattern.

Generally, working in factories means producing a lot of garments with the same prototype. Here the woven fabric is cut and its various parts are assembled by a highly synthetic machine. To start own business like tailoring shop we need investments for machine and other equipment. Those who do not have their own space can rent a room and set up the production. To estimate the raw materials and to calculate the cost, we need to possess skills.

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Introduction of Trade

Objectives: At the end of this lesson you shall be able to
- **knowledge of embriodery industry**
- **describe about hand embriodery**

Introduction

As we know clothes are used for our basic needs and they protect us from wounds and injuries. Clothes helps in identification of different group of peoples and community. Clothes have decorative works on them. People wear different types of clothes. Trimmings, die and Embriodery are some way to make the garment materials attractive. These are medias that predicts the historical arts and creativeness.

Hand Stitches

The practice of drawing many types of patterns on clothes and wearing them with colourful threads, gold, silver, and lace threads has been there since ancient times in our country.In India, people like muslim, sindh,punjabi, gujarati living in the north like this kind of embroidered beauty stitched clothes, especially other country people who visit India appreciate its excellence.

Job Prospects and Objectives of the Course

Objectives: At the end of this lesson you shall be able to
- **knowledge of job prospects and objectives of course**

The future purpose of embriodery is unique.

Student who complete the embroidery course can secure employment in the garment industry.

1 One can work in jewellery factories.

2 Apprentices can start their own unit.

3 Lesiure time can be utilized without wasting by learning embroidery

4 It helps to acquire artistic knowledge by stitching nature's figures and various patterns.

5 Self employment oppurtunity is attainable.

6 Its helps to generate revenue.

7 By teaching others career growth can be achieved.

8 This work makes progress virtues such as calmnes,self control,patiene,diligence,intellectual development.

Disadvantages of wearing loose clothing

Wearing loose clothing causes the dress to get caught in the back wheel and is harmful to the operator and the machine. So it is safer to avoid loose clothing.

Disadvantages of hiring without experience

Do not operate the machine without prior experience. Before operating the machine, you must know how to operate it, otherwise there will be defects like needle breakage,thread cutting. If any such defects occurs during operating, it should be reported to the appropriate person immediately.

Effects of working by leaning on the machine

Leaning over the machine can cause hair to get caught in the balance wheel also bending over while working cause the broken needle to injure the eyes. So always work in straight posture.

Necessity of using appropriate tools for work

It is necessary that we use proper tools for working on machine. The screw in the bobbin case will break if big screw drivers are used.

Necessity of keeping work place clean

The workplace shold be kept clean and tidy. placing the machine in wet air and rain can cause the machine to rust and the fabric it sews with rust stains. So keep the machine in a safe place.

Thing to be observed while working with electricity

when using objects that are opertated by electricity make sure it is free electric shock,before use,check that the electrical connections are properly used before opearting.

Preperation

Handling of embroidery machine

1 Hold the frame with index and thumb finger firmly while sewing.

2 Frame should be hold with full grip while sewing

3 Frame should be adjusted according to the design trend.

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Safety precautions to be followed in the lab

Objectives: At the end of this lesson you shall be able to
• **explain about safety precaution.**

Safety is important to everyone and maintaining a safety workplace is the responsibility of every practitioner. Trainees must keep their machine, work station and tools clean and in proper places. In case of emergency trainees must know the switch. It is very important to pay attention to your work and hands while working on the machine. It helps to prevent injuries and accidents. All trainees must learn the following safety rules and follow them at all times.

1 Always keep the floor clean (work place). If there is oil spilled on the floor wipe it up immediately to prevent anyone from falling.

2 Always practice proper posture to reduce fatigue. It helps to prevent accidents and increase efficiency.

3 Motor must be switched off before cleaning,oiling and repairs.

4 Before operating the machine ensure that the machine is cleaned, threaded properly and the needle thread is set perfectly.

5 While Operating the machine keep your hands at a safe distance from the needle.

6 When iron box is not in use do not neglect to turn off the switch.

7 When not working on the machine stop the hand wheel and do not use hands to start.

8 Keep your feet off from the pedal when you are fixing up the needle or threading.

9 Turn off the motor when not in use.

10 Avoid loose clothing while operating the machine. If your hair is long tie it back.

Safety precaution to be followed in the lab and safety precaution maintenance

Safety precautions are necessary for workers to prevent them from injury while working on machinery.

Safety precautions are of two types.

- To be followed in industry.
- General safety precaution for floriculture.

1 Using sharp tools

While using sharp tools be careful when giving it to another person. Buyers carelessness can cause a sting. Also droping the sharp parts of the tools blunts the sharpness.

Tools required for embroidery work

- Needle
- Scissors
- poker
- Frame
- Thread

Transferring by Ironing

Designs are transferred to silk,satin, cotton by using hot iron box in this method. Design papers are available in blue and yellow colors. These are made for use on light coloured fabrics and dark coloured fabrics. There alternate image need to be ironed on fabrics.

Place the fabric to be designed on the table, turn over the waxed patterned paper so that the design is printed on the fabric and press it well with iron box on the design lines, the wax will melt and the pattern will be printed on the fabric. Remove the paper when it is hot else the paper sticks to the fabric and it must be ironed once again to remove it.

Stencil Method

To change the design in the stencil method. select the design which are not larger and without too many curves. Draw the design on thick cardboard and cutout the shape separately,Mark the place where the shapes will be drawn on the fabric and place the cut pattern on the table without creases on the fabric and join it with pin. Then draw the outlines and inside signs with color pencils.

Block Method

Wooden Blocks are sold as readymade in stores. Designs are carved in the logs.

In favourite colour thread,single or double strand can be used to stitch. The needed should be incerted from the right side and pulled out at wrong side of fabric.

Knowledge of tools used in training institute

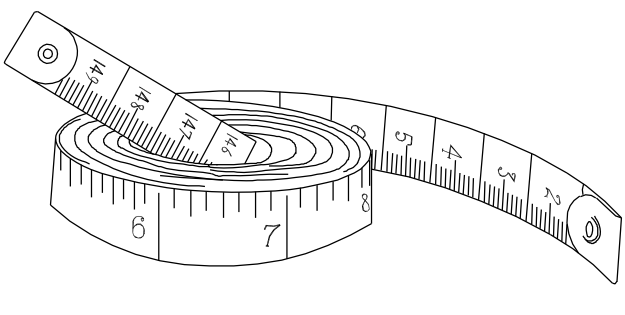
Objective: At the end of this lesson you shall be able to
• **understand the tools needed to embroider and their applications.**

1 **Inch tape:** Size tape should be sturdy and standard when selected and should not be stretched beyond the size when measured. Typically, it sizes between 06 cm wide and 100 to 150 cm long and the measurements in

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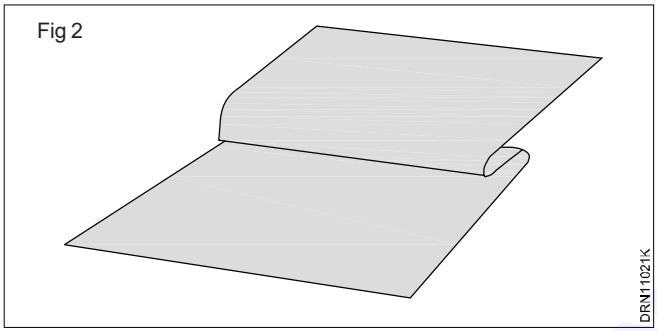
between are in centimeters and millimeters. We could see inches on one side and centimeters on the other side.(Fig 1)

Fig 1



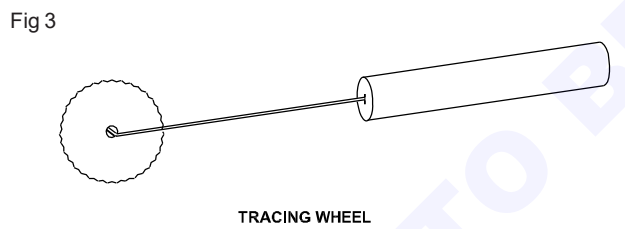
2 **Tracing Paper:** This is a thin paper used to transfer shapes onto fabric. If it is spread on the design, the design will be visible on the paper. So, it becomes easy to see the design through this paper. (Fig 2)

Fig 2



3 **Tracing Wheel:** It has a handle-attached saw wheel like teeth. It is used to transfer shapes on fabric without using tracing paper. (Fig 3)

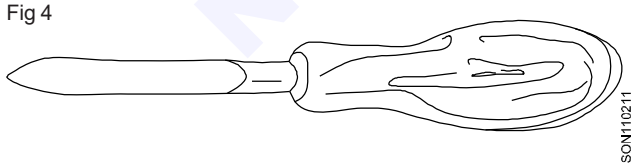
Fig 3



4 **Stiletto:** This piercing tool's front portion is sharp and slender whereas the back is huge. This tool helps to

Fig 2 These holes are woven with microfibers. It is used to stitch eyelet embroidery. (Fig 4)

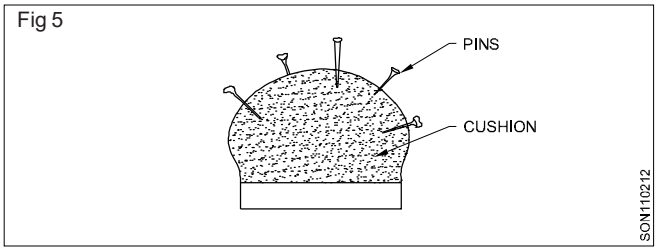
Fig 4



5 **Dress Maker's Carbon:** It is available in many colors and wax on one side. It is used to draw the design on the fabric with the help of tracing paper.

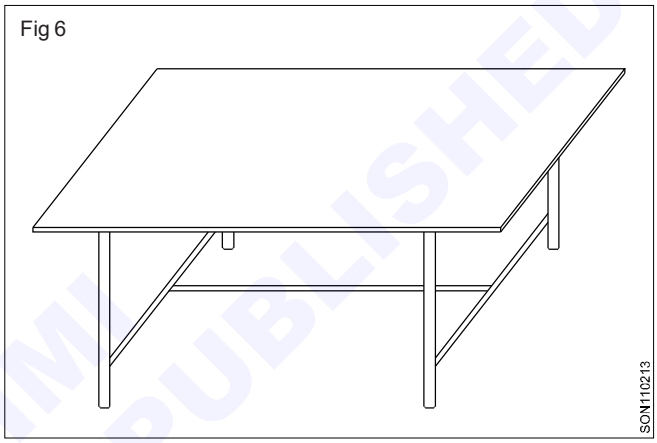
6 **Pin Cushion:** This cushion is for pins. It is available in various forms. It has sharp, clean needles and needles inserted. The mattress like structure is used to take the needles and pin them back easily. The magnetic web located at the top makes it easy to catch the needles. (Fig 5)

Fig 5



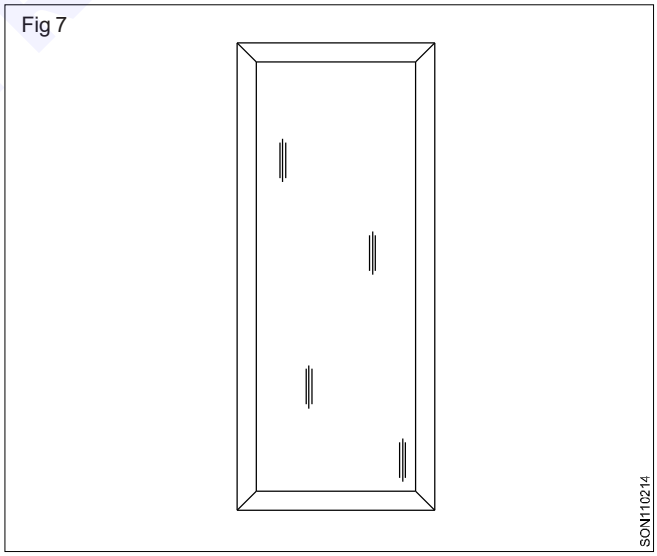
7 **Cutting Table:** It is 150 cm long, 90 cm wide and 45 cm high. On the top surface of the table, sun mica sheet is stuck. It is used to cut the fabric. (Fig 6)

Fig 6



8 **Glass:** It helps to see the whole pattern of the dress and the embroidered design of the stitch. (Fig 7)

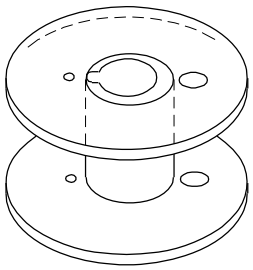
Fig 7



9 **Bobbin:** It is used to spin the base thread when sewing on an embroidery machine. It is made of plastic and metal. It should be used appropriately for the machine. (Fig 8)

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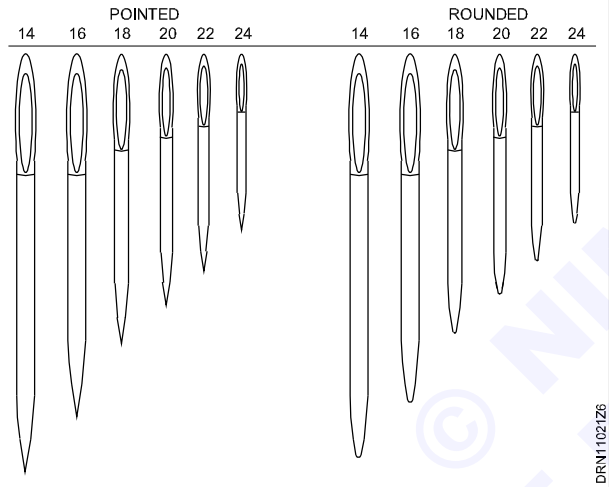
Fig 8



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10 **Needle**: Sewing takes place while the sharp part of the needle and the stem part are inserted into the cloth. The types of needles and the numbers are marked on the top of the pocket. The size of the needle is calculated by its length and the thickness. Crewel needle number 9 is used for hand embroidery. Sewing needles are made of nickel -coated steel. (Fig 9)

Fig 9

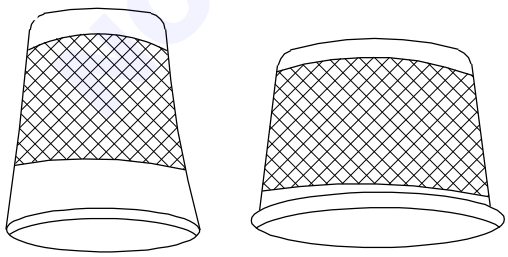


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11 **Thimble:** The middle finger armor is made of rubber, plastic and metal to help keep the needle from sticking when embroidering. It is used to sew without hurting the middle finger.(Fig 10)

12 **Thread trimmer/ Sniper:** It is used to cut yarn during sewing. This tool is known as palm scissors. There is a ring on the trimmers. We need to use this tool like squeezing a cloth in the palm of your hand.

Fig 10



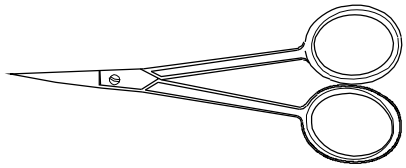
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13 **Embroidery Scissors :** Its handles are long and have a narrow and cut mouth. This is used to cut the yarn neatly into small pieces.(Fig 11)

Study of embroidery thread

Embroidery thread is yarn that is manufactured or hand-spun specifically for embroidery and other forms of needlework.

Fig 11



SON110217

Threads for hand embroidery include

1 Embroidery floss or stranded cotton is a loosely twisted, slightly glossy 6-strand thread, usually of cotton but also manufactured in silk and rayon. cotton floss is the standard thread for cross-stitch (Fig 12)

2 Pearl cotton is S-twisted, 2-ply thread with high sheen, sold in five sizes or weights (No. 3, 5, 8, 12 and 16 (Finaca), with 3 being the heaviest and 16 the finest).

3 Matte embroidery cotton is a matte-finish (not glossy) twisted 5-ply thread.

4 Medici or broder medici is a matte-finish (not glossy) twisted 5-ply thread.

5 Crewel yarn is a fine 2-ply yarn of wool or, less often, a wool-like acrylic.

6 Persian yarn is a loosely twisted 3-strand yarn of wool or acrylic. Often used for needlepoint.

7 Tapestry yarn or tapestry wool is a tightly twisted 4-ply yarn.

Threads for machine embroidery are usually of polyester or rayon (less often cotton or silk).

Threads, like textiles, can contain compounds that may be harmful to humans. Many dyes have been shown to be allergenic. Testing for the presence of these dyes, and other additives can be done at many commercial laboratories.

Certification to the Oeko-tex standard may also be applied for. This tests the component for over 100 different chemicals and certifies the component according to human ecological safety.

Fig 12



EMBROIDERY SKEIN THREAD

SON110415

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Basic stitches by hand

Objective: At the end of this lesson you shall be able to
- **describe the temporary and permanent stitches.**

Basic hand stitches

Basic stitches are divided into constructive and decorative stitches.

Constructive stitches are further divided into temporary and permanent stitches.

Temporary Stitches

Basting or Tacking is a temporary stitches used for holding two or more layers of materials together before the permanent stitches are given.

Usually this stitch is horizontal and is worked from right to left. This is the only stitch which is started with a knot for basting use a contrasting color thread so that it can be easily seen and removed.

The length of the stitch will vary depending on the weight of the fabric and how securely the pieces are to be held together.

To end basting make two stitches. One on the top of another. There are several types of a basting stitches.

They are

- Even basting
- Uneven basting
- Diagonal basting
- Slip basting
- Tailor tacks

1 **Even basting** is used on smooth fabrics and in areas that require close control such as curved seams. All stitches are of equal length and of equal distances.

2 **Uneven basting** is used for general tacking for edges that require less control during permanent stitch.

3 **Diagonal basting** is used to hold or control fabric layers within an area during construction and pressing.

4 **Slip basting** is used mostly in machines seams in checked and striped fabrics. Tack intricately curved sections or to make fitting adjustments.

5 Tailor's tacks are used to transfer individual pattern symbols such as darts to double layers of fabric.

Permanent stitches: This is the simples form of hand stitch used on almost every garment.

i **Running stitch** is the simplest of all the hand stitches. It is used for sewing delicate fabrics seams, tucks, gathering, shirring, quilting mending can be done with this stitch.

ii **Hem stitch :** This is used to secure down a folded edge of material. Hemming appears as slanting stitches on the wrong side and small at right side.

These stitches should be fine and spaced close enough to hold the told securely in place. Before starting the hem fasten the thread with several tiny stitches on top of each other. Finish the hemming with several stitches to fasten it securely.

iii **Slip stitch :** This is a type of hemming used to join two folded edges or to join one folded edge to the flat surface. This stitch is faster and easier to made a seam from the right side itself used to attach patch pockets, jacket lining, securing.

iv **Back stitch** used to attach two pieces of cloth together by using a handmade stitch. It is strong and sometimes substituted then machine stitching. Its right and wrong side stitches are different. It is used to repair a seam when you do not have machine.

v **Over casting :** It used on raw edges either single or double threaded or layer to prevent them from trying.

vi **Whip stitch :** This stitch is similar to over hand stitch used to finish edges. The only difference between is in overhead the needle is pushed slantingly and the stitch is formed straightly and in whip stitch to needle in pushed straight down forming slant stitches.

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Tracing methods and Precautions used during tracing

Objectives: At the end of this lesson you shall be able to
- **explain design transferring methods**
- **explain about embroidery threads.**

Design transferring techniques

Transferring the design to the fabric is the primary task in embroidery. Other than in free machine embroidery, i.e., stitched without designs, it is necessary to transfer the design selected for your stitch onto the fabric. There is a wide range of technique for this; each technique differs with its application.

Select a design suitable for your work with respect to the fabric used, design selected, materials available, etc. The basic design transferring technique are traced method, Dress maker's carbon paper method, pricking and pouncing method and tacking/basting method.

Tracing method is most suitable when a light colored, light weight fabric such as cotton lawn or a fine calico is used. When the design is drawn or printed in dark thick colors, it easily helps to see through it with light colored fabrics. The main advantages of this method are it is less time consuming and requires no other materials except a sharp pencil or a disappearing ink pen and a light box. The light box is used for transferring the design onto the dark fabric. But care must be taken as we may ignore any detail of the design, resulting in an incomplete imperfect design. (Fig 1)

Fig 1



TRACING METHOD

SON110411

Dress maker's carbon paper method is an important method widely used for transferring the designs. It works in the same way as the stationary carbon, but it tends to be on heavier paper, less likely to tear when pinned. It is available in different colors like blue, white, yellow, etc., hence it is used with both dark and light fabrics.

An important precaution to be followed is not to lean or rub the paper while drawing the design, as it may cause smudges of the carbon marking on the fabric. (Fig 2)

Fig 2



CARBON PAPER METHOD

SON110412

Pricking and pouncing method is an ancient method of transferring the design onto the fabric. It is one of the methods followed widely throughout the medieval period and before. While now mostly suspended by other more convenient methods, it still works and is very useful for transferring large designs, where the previous methods not suitable. Use fine pouncing powder or similar, though for pale fabrics where this doesn't show up sufficiently, blue powder is available. Special pricking wheels are used for transferring complex designs. Though, it is time consuming it gives, good output and also it is less expensive. It is suitable for all kind of fabrics other than the slippery synthetic fabrics. (Fig 3)

Fig 3



PRICK AND POUNCE METHOD

SON110413

Tracking (basting) method is another important transferring technique. Most of the transferring methods require the fabric to be, worked to be marked up directly, whether with a pencil, or disappearing ink pen, carbon paper or pounce powder etc. in all these methods, there are chances to get marks, which we didn't intend on the fabric, whether smudges or lines. But, in basting method, the design is tacked and can be unpicked carefully, if it is still

visible, when the embroidery is completed. The main drawback in this method is that it results in a mirror-image on the fabric. (Fig 4)

Fig 4



TACKING METHOD

SON110414

Hot Iron Transfers

Hot iron transfers are patterns that come ready-to-use and feature a wide range of subjects. They are normally printed in black, blue, or gray ink. Transfer these designs to the fabric using a hot iron in the same manner as transfer pens and pencils.(Fig 5)

Using a light box

An artist's light box can prove useful when transferring designs onto fabric. Place the design and then the fabric on top of the light box's surface, and switch on so that the light shines through from behind. This allows you to see through most fabrics and you can then draw with tailor's chalk or a fabric pen.

Fig 5



Using a window

If you want to embroider on a fine, sheer fabric, then you can use a window as a makeshift light box.

Draw or print your pattern onto paper and use masking tape to attach it to a nearby window. Then put your fabric over the top of the paper and again tape in place. Using a hard pencil, draw around the outline which will show through the fabric.

Technical terms related to design and embroidery.

Objectives: At the end of this lesson you shall be able to
• explain technical terms.

Tracing paper: The paper useful for tracing designs from a book or other sources. It comes in several weights.

Embroidery scissors: Small and have sharp points and ideal for fine work like cut work.

Thimbles : Protects middle finger while embroidery comes in sizes 6 to 12

Embroidery floss: Loosely twisted 6 strands thread. Available in silk, cotton, rayon and in many colours. Works well in every type of embroidery. Strands are separated for finer work.

Tracing wheel: This tool is used to transfer the design to fabric.

Pounce: This is a fine powder used in transferring the design by pricking method.

Hoop/frame: Consists of two rings, fabric is stretched over the inner ring and held in place by the outer ring. Comes in wood, metal and plastic, available in many sizes.

Value: Refers how to lighten or dark a colour (light having a high value)

Needle threader: Facilitates threading the yarn through eye of needle.

Seem ripper: It has sharp-edge for cutting seams.

Stiletto: Stiletto also known as 'Awl' is a small and sharp tool used to make the round holes for eyelets.

Bobbin: The spool or device that holds the lower thread that interlocks with the needle thread to form a stitch.

Hue: A true colour, without tint or shade.

Tint: Adding white to a pure colour.

Tone: Adding gray to a pure colour.

Shade: Adding black to a pure colour.

Trimming: The action to cutting loose threads, removing tacking etc,,. From the final embroidered product.

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Embroidery: Embroidery is a 'Thread Art' used to embellish a garment with the help of needle, threads and materials. Also known as surface ornamentation technique.

Design: Stitches that compose an embroidery pattern called embroidery design.

Colour wheel: A circular diagram showing the relationship between primary, tertiary, secondary colours. It has three primary colors three secondary colors and six tertiary colours. Colours schemes are defined from the colours wheel.

Water soluble pen and pencils : These are used to transfer a design on to fabric temporarily. The marked lines wash out when the article is laundered.

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Flat Stitches

Objectives: At the end of this lesson you shall be able to
- **know about the basic hand embroidery stitches**
- **application of stitches**
- **select suitable design for basic stitches.**

Running stitch: It is essential that you lesson to work the basic stitches, for successful embroidery work. While beginning the embroidery, the design must be outlined first. Running stitch used for outlining purpose oftenly, as well as decorate stitch. This used for base stitch for interlacing work. The various stitches are done by using this basic stitch. Whipped running, laced running, double back laced running, double whipped running, double laced running are running stitch variations.

Use outlining stitch of a design and foundation stitch for whipped and woven decorative stitches. This stitch must be even in length and spaces between stitches even while working. Keep stitch about three times as long as space between.

Nice for curved line design. Running stitch variations suitable for decorative border. Filling work of design done by running stitch, which is easy and quick to work.

Back stitch: Back stitch also one of the basic stitch. Strongest and most versatile of the hand stitches. Back stitch may be combined with many other stitches to produce special effects. For example work chain stitch first and then, with contrasting colour, work back stitch into the center of each loop, you have chained back stitch or work large back stitches and then whip with contrasting colour for whipped back stitch. This is the back of the outline stitch. It follows a tight curve very well if the stitches are kept tiny. It is the base stitch for many other stitches like Pekinese, interlaced band etc.

This stitch is suitable for all type of design. In small and simple designs it give simple outlining effect. Very tiny back stitch used for sharp curved line in a design. Small, evenly space and regular of this stitch gives, the machine stitch effect to the design.

Stem stitch: The stem stitch is most frequently used for narrow, curving lines. This stitch is used as outlining stitch for another stitch which used as filling to design edges, accent etc. For example, work a design in Tambour embroidery and then outline. Outside edge with lighter or darker shades for contrast.

Very suitable for outlining any area, stems etc. The stitches should be tiny, especially on a sharp curve. When curve is in the opposite direction, thread may be held always above the line. It gives the twisted cord effect.

Herringbone stitch: It is use for hemming all my clothes. It gathers the lower fold gently and "floats" the hem over the fabric. This stitch is also used as decorative stitch in wide borders. Sleeve hemming edges decorative with this stitch for beautiful look.

This is foundation stitch for its variations. If this stitch work closely, it is known as closed herringbone. In basic stitch, interlace work done for laced herringbone, whipped herringbone and woven herringbone stitch.

Double herringbone stitch: This stitch is one variation of herringbone stitch. Foundation stitch is done by basic herringbone stitch. In second journey, herringbone stitch work with another contrast colour thread. This second journey work between foundation herringbone stitch.

This stitch is simple and beautiful to look. It is also easy to work You can finish it quickly. Contrast colour thread combination work gives the attractive effect. It used in wide borders.

Satin stitch

Satin is a flat filling stitch that looks simple to work. It gives neat finishing and good appearance only with good practice of learning. Blocks of stitches can be worked in different directions to create areas of different shades and effects.

This stitch is most suitable for embroidering floral designs as well as the other design patterns like geometrical, animal designs, natural scenario etc. This stitch is worked on all kinds of fabrics like satin, silk, linen corduroy, georgette etc. It can be worked even in any type of canvas.

Padded satin

Unlike satin stitch has a slightly raised shape. It is used to emphasize shapes by making them stand out from flat areas of stitching. This stitch is worked with an embroidery loop to prevent puckering.

The design is padded with closed worked.

Long and short stitches

Pictorial embroidery is a favourite one of many people.This stitch is suitable for filling flowers and leaves.It is sewed on the right sife of the fabric so that the fabric under the stitch is invisible and on the wrong side the stitches leave a small spot.

Fabrics to be used

Closely woven long cloth, casement, poplin are used to portray flowers and leaves with large petals and also different colour threads are used for this stitch.

Designs

Flowers, buildings,birds,animals,old age people are drawn and stitched with this stitch.

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Fig 1

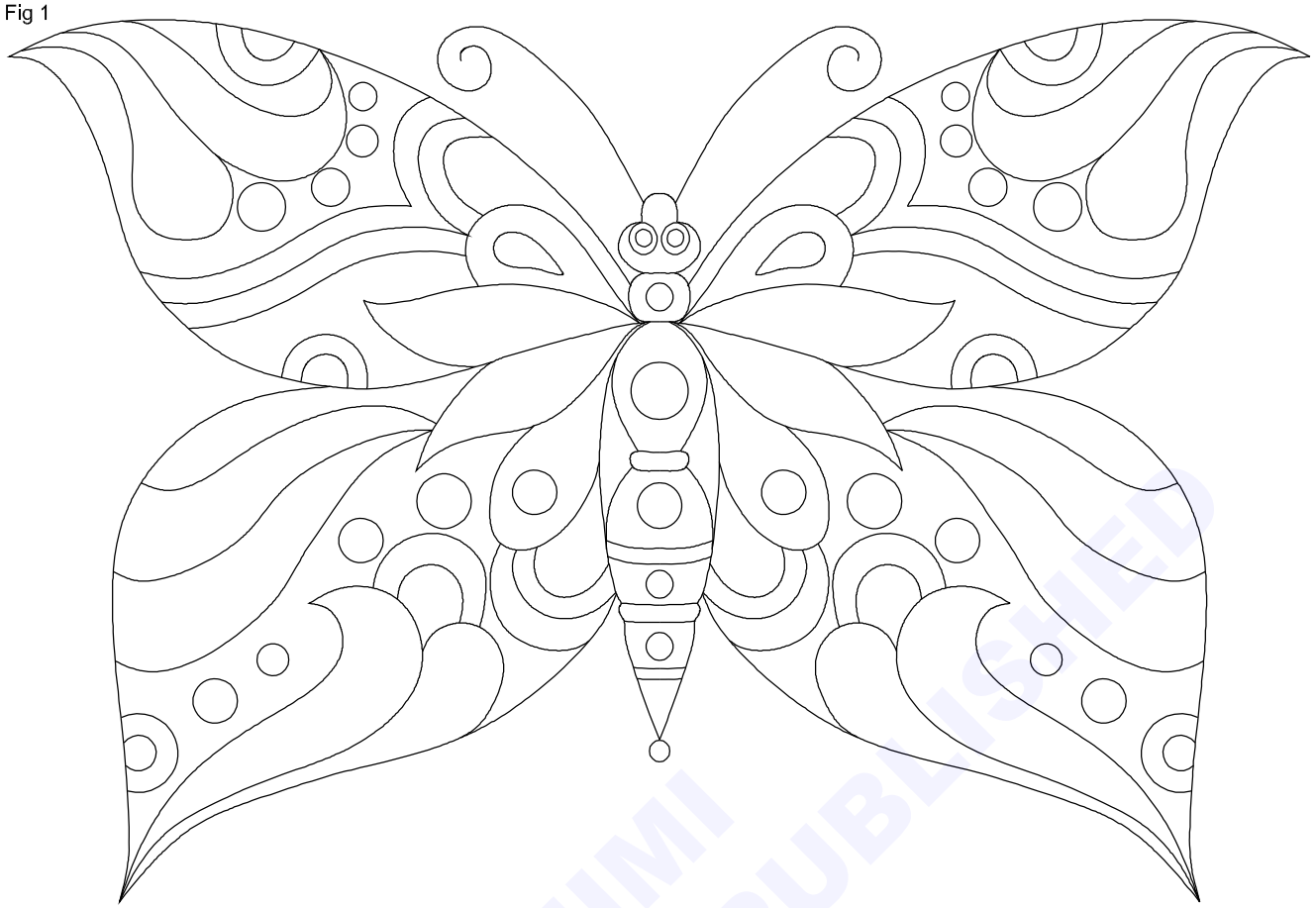


Fig 2

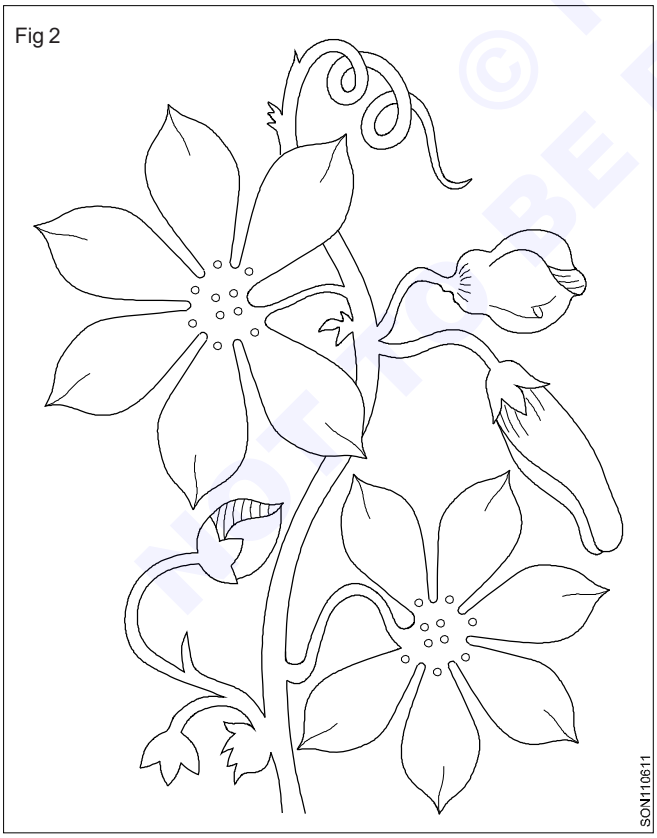
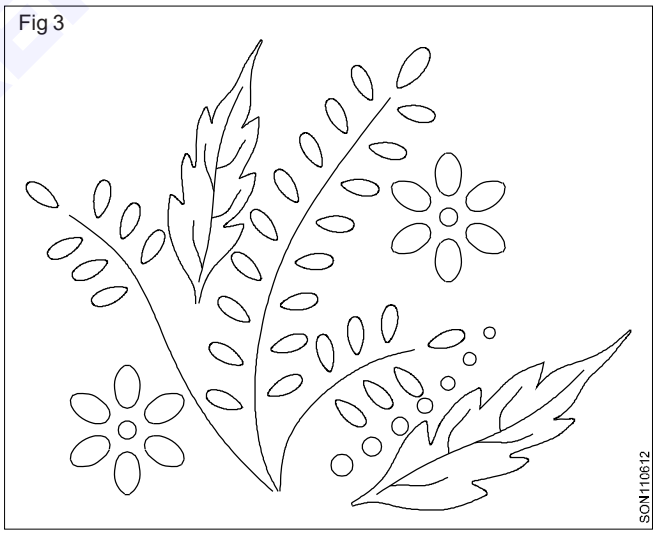


Fig 3



Sewing method

Start stitching from the base of the petal.The first thread should be single threaded and one stitch should be placed on top of the fabric as a signle stitch and one stitch should be stitched closely and tightly on top of the stitch without diagonal falling.

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Loop Stitches

Objectives: At the end of this lesson you shall be able to
- **knowledge of loop stitches**

Loop stitches

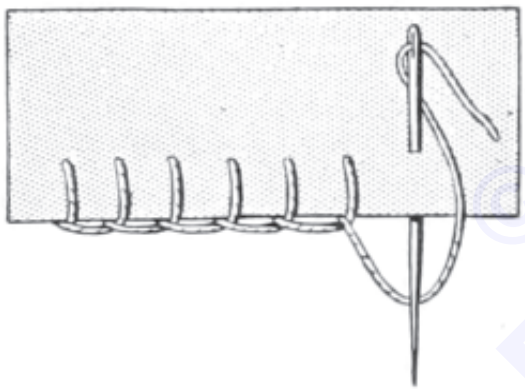
Chain stitch, wheatear stitch, lazy daisy stitch,double lazy daisy stich, button hole stich, feather stitch, fish bone stitch are all types of loop stitches,

Chain stitch: This is one of the beautiful stitch used in embroidery work. Crewel from India is usually worked entirely in chain stitch. For shading in Jacobean patterns, just work row upon row of chain, following contours. Chain stitch may be whipped or laced to decorate it further.

It is used in line covering, outlining of a design like branches, stem etc. This is the basic stitch for its variations. Its variation stitches used for decorative borders, filling etc. Zigzag chain, cable chain stitch, sloping chain, Russia chain stitch, lazy daisy, open chain stitch are some of its variations.

Floral design is suitable for this stitch. This is more beautiful for stems, branches, leaves like designs. This is one of the outlining stitch. Two strands of yarn is enough for beautiful work.

Fig 1



Blanket stitch

The loop stitch is faster and easier to sew than any other stitches, Blanket stitch is also known as loop stitches, comb stitch, Herring bone stich. when they are stitched very closely they are named as Button hole stitch.

Stitching procedure

Start to stitch from right to left. Draw two dotted parallel lines.

In favourite colour thread,single or double strand can be used to stitch.The needle should be inserted from the right side and pulled out at wrong side of fabric.

Benefits

This stitch is used for decorating the edges of leaves.flowers,garments edges, Table cloth, pillow cover, hand kerchief etc.

Closed loop stitches

Stitching looped stitches very closely is known as closed loop stitch.This stitch is applied on various decorative motifs and also used to decorate the shirts hem. It is also stitched to hem the criss-cross edges of thick fabrics like wool

An open button hole stitch also known as a scallop stitch, is sewn to prevent the edges of the wool from fraying

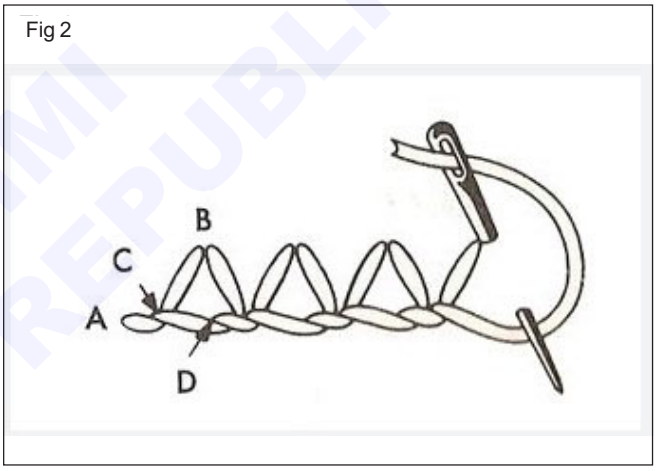
Up and down stitch

Visually it appears like two line are connected.Choose a color thread that matches the color of fabric and start to stitch.

Uses

Table cloth,pillowcover,Hand kerchief, childrens garments and the edge of required garments can be decorated by using this stitch.

Fig 2



Cable chain: This is one of the variations of chain stitch. It looks like a heavy chain. Spacing of stitches is important. Make little longer chain than the tack for good look. Work very evenly for best effect.

This is suitable in medium width borders. Used as decorative stitch. In smocking also it will be used. Work in single lines for beautiful appearance.

Simple and small designs are suitable for cable chain stitch. This stitch give neatness to the single curved line designs. It is simply decorative to look. It can be finished quickly. Use thick yarn to this stitch for attractive effect.

Lazy daisy: Lazy daizy stitch is one of the decorative stitches. It is also called "Loop stitch" as it is worked by making a loop. Due to a gap between two stitches, it is known as "detached chain" also. Its other name are knotted knot stitch, picot stitch, tied loop stitch, tail chain stitch.

Suitable for small handkerchiefs, baby frocks, bags, pillow covers, table covers, sari sprays.

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Double lazy daisy: One of the variation of lazy daisy. When a petal is broad, two chains are made, one inside and the other outside. This gives a filling effect and it is called a "Double lazy daisy".

Just as we use two contrasting colour threads in the chequered chain stitch, we can use two colours in the same way in a broad petal also.

Two colour scheme makes it more attractive.

Fig 3



Feather stitch: This is also used as decorative stitch. It is great filling stitch when worked row after row. This stitch is most suitable for fat flower stems, wide borders etc. feather stitch work with two parallel guide line. Working from top to bottom, pick up several threads of the fabric to the left, holding the needle obliquely and stitching towards the centre with the thread under the needle.

Double feather stitch: This stitch is similar to feather stitch. It is also used for filling effect for branches, stems etc. Mainly useful for wide decorative borders. Three light guidelines drawn to work double feather stitch. This is used for edges of blanket and baby kimonos. Select contrast colour thread to work this stitch. Thick layer thread is suitable for attractive effect. The branches may be kept all even with each stitch the same length or they may be varied in length.

Fish bone stitch

This stitch work is similar to the herringbone stitch, it suited for oval and narrow shape designs like leaf shapes. The vein of a leaf is used as the centre core and stitches are taken alternately to its leaf and to its right.

Fig 4



The shape of the design in the vein is clearly seen after completion of the embroidery. It can be used two shades of the same colour are used in the design, to make it more attractive.

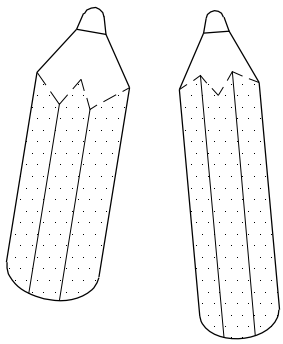
The contrasting colour yarns are taken in the needle and then each colour is used one after the other. The two shades of a colour in the design gives the impression as if done on wood. Embroidery of this stitch continue more time. Thus it is used for more designs , were less embroidery is needed.

The fishbone stitch is used to embroider bibs, baby frocks, frock yoks, baby suits etc.

Open Roumanian stitch

This is one of the variations of the fish bone stitch. The fabric is placed or fixed tightly in the embroidery frame to avoid puckering, because of broad shapes of the designs. In broad leaf plait will be formed in the centre of the design. While in a narrow leaf the vein type of appearance will be seen after completing the design. Different shades cannot be taken in this embroidery. It is used for table covers, sarees, bed sheets, pillow covers, petticoats, punjabi dress etc.

Fig 5



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Cross stitch

Objective: At the end of this lesson you shall be able to
• explain cross stitching.

Cross Stitch: Cross stitch is a kind of flower stitching. This type of flower stitching is mostly employed in matty cloth. This stitching seen as x symbol.

This type of stitching in full design flower work is done. In this stitching the threads in the cloth is counted and cross stitching is done.

Button hole stitch

Button hole stitch is a traditional embroidery stitch. It is used as a decorative finish for edges of blankets and in making of hand worked button holes.

Stitches may be of same size or grouped at regular intervals. This stitch is more suitable for free hand design. This stitch is worked between pair of lines.

It is also worked in cut work, eye let hole and applique work. Button hole stitch is also used for filling the designs.

Single cross stitch : In this only one cross-stitching is stitched. It has got another name as conditional stitch.

Star cross-stitch : This stitching appears as in the form of star, hence it is called as star cross. To carry out this flower stitching more quantity of thread is needed. In appearance it gives charming visual effect. This star stitching is named as bed cross stitching. It is sample form of cross-stitching

To decorate pillow corner,

Cuisine cover, bed opened

Table cloth etc this cross-stitch is used.

In one row in same color various stitching first created and then again through the same this type of stitching is completed. This will save the time and also gives soft effect.

Knotted Stitch

Objectives: At the end of this lesson you shall be able to
• state the features of french knot
• describe the uses of bullion knot.

French knot

French knot is a slightly textured and raised stitch. knots can be worked close together to fill an area completely. Producing a lumpy effects . Lumpy knots as desired within design area.

French knots can be made larger by increasing number of twists of thread around needle. These are mostly used for floral patterns. All types of fabrics are suitable to work thin stitch. Poplin is often used by the beginners, to achieve good results. Apart from skein threads. Pearl threads and woolen threads are also used.This stitches are widely used to embroider the ladies wear and kids wear.

Bullion knot

Button knot is the variation of the french knot. The stitch varies from the french knot with the number of thread twist. It is used for decorative purpose. This finished stitch, resembles the shape of a coil. while working, do not wrap the thread tightly around the needle. So that to avoid becoming it hard to pull through, to fix them in place. Two contrast colours of thread is in the needle to give an enhanced effect to the stitch.

It is often used to work the floral designs especially the “rose” flowers

This decorative knot stitch is widly used to embroider the flowers or buds. It should be worked patiently and one attains perfection with good practice.

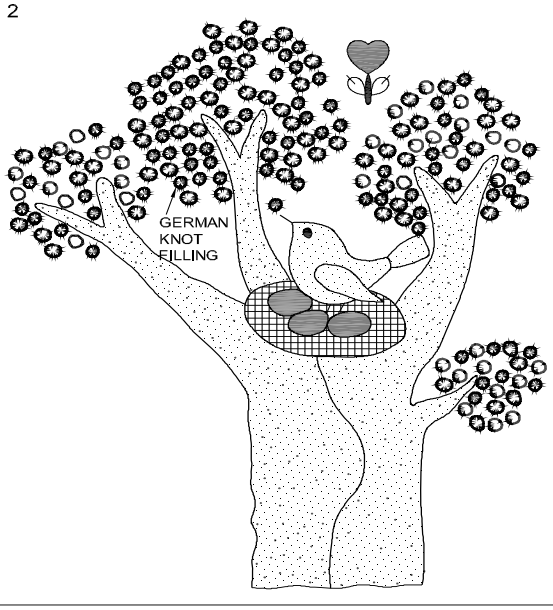
This stitch often used to embroider the sarees, baby frocks and other articles.

Fig 1



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Fig 2



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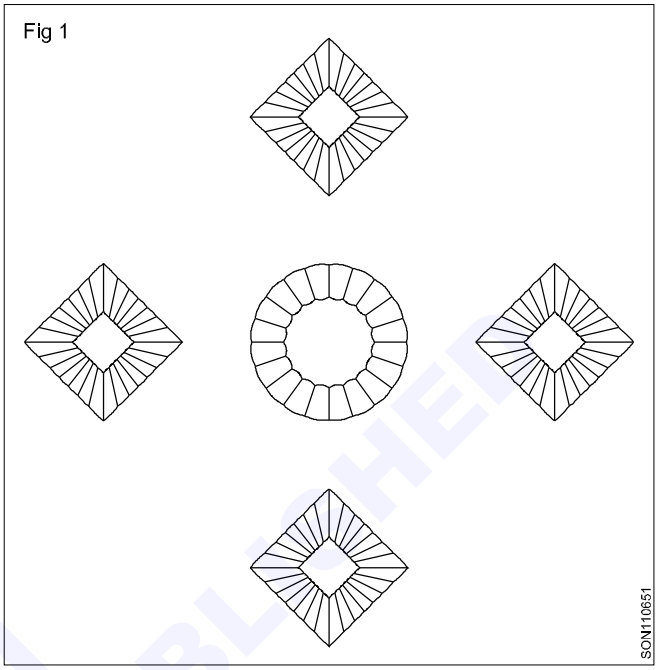
Mirror work

Objectives: At the end of this lesson you shall be able to
- **gain knowledge of mirror work**
- **known about application and accessories.**

Mirror work: This is otherwise known as Abhu Bharat mirror work from Punjab, Kathiawar in which round pieces of mirror is attached, one button hole stitch pattern are created with the fixing of round shaped mirrors. The design to be embroidered are first sketched out by hand. The portion where the mirror has to be stitched is shown by a small circle, the rest of the embroidery is prepared with 2 silken thread either with stem stitch or herrinbone stitch closely embroidered. The colours used for this embroidery is rich rust, red, light green, pine, indigo surrounds the mirror. This is done on cholis, sharara.

Motifs are of flowers and creepers with rows of mirror. This is done on table cloths also. Same colour thread or contrast colours also used.

Fig 1



Decorative stitches

Objectives: At the end of this lesson you shall be able to
- **state the types of couching work**
- **state the uses of couching work.**

Couching work is also known as laid work. It is worked either by laying a single cord or more number of threads of matching or contrasting colours. It is different from other embroidery stitches, as it is similar to a machine embroidery work cording. This stitch gives a embossed effect to the design.

It is often used to outline the design. skein thread is most preferably used for laying , where as woolen threads are also used. Care must be taken to select the fabric for couching work, as the embroidery work is heavier than other stites. It should not form any wrinkle to the fabric. Thick fabric like linen, poplin, silk and knitted fabrics are suitable for couching work. Other than skein threads , zari and pearl threads are also suitable.

Detached couching

Detached couching is one of the variety of couching work. Unlike couching work, detached couching is worked with two rows skein threads at the same time. As the work makes the fabric heavier than the couching heavier fabrics like corduroy, brocade etc are used. Hand embroidery needles are selected with great care to suit the heavy fabric. Apart from skein threads, woolen threads are also used for detached couching work. Detached couching work is suitable for cushion covers, bed spreads, carpets, table cloths etc. Zari threads are also used to enhance the beauty of the stitch.

Couching stitch

In embroidery, couching and laid work are techniques in which yarn or other materials are laid across the surface of the ground fabric and fastened in place with small stitches of the same or a different yarn.The couching threads may be either the same color as the laid threads or a contrasting color. When couching threads contrast with laid threads, patterns may be worked in the couching stitches.

Coral Stitch

A coral stitch is a knotted stitch worked from right to left, often with a drawn line for the needle to follow.

The working thread is held down with the left thumb, the needle then takes up a small portion of the material at right angles to the drawn line, with the working thread underneath the needle point (so creating a loop). The needle is pulled through the loop made by the working thread. The process is repeated until the line is completed. When the coral stitches are worked very closely together, the stitch is sometimes known as a knotted outline stitch.Also known as beaded stitch, coral knot, German knot stitch, knotted stitch or snail trail.

Pistil stitch

The hand embroidery stitch called the pistil stitch (or the elongated French knot) comes in really handy when

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stitching flowers. The reason is obvious - it looks like its namesake, the pistil on the inside of a flower.

The pistil stitch is an easy stitch to master, and it works well inside all kinds of flowers or even on its own, in completely un-flower-related circumstances.The pistil stitch on the Secret Garden project, on the flowers.

Sippy stitch/ Palestrina stitch

Many embroidery styles from Italy have Palestrina stitch and there is even an embroidery style called the Palestrina. This style of embroidery uses thick threads, usually white or natural-colored thread on dark linen or dark red, russet, or blue thread on white or light-colored linen. The village women still stitch and sell this type of embroidery. This stitch is usually used for outlining or bordering purposes with a few additional stitches such as the Stem Stitch, French Knot, and Bokhara couching. Today, this stitch is popular in surface embroidery, Crewel Work and Crazy Quilting. Filling an area with the Palestrina Stitch can give a beautiful bumpy texture. This stitch can be used over edges and adding a bead between the stitches adds a certain richness to it.

Wheat ear stitch

Wheatear stitch is a versatile easy stitch that is often used to depict wild grasses and wheat above. In this Figure various forms of wheatear are used. Wheatear consists of two straight stitches that are worked diagonally in a V like shape before a chain stitch laces together the stitches at the base.

This stitch will follow a curve well or it can be worked in single units and arranged in patterns. Since the structure of the stitch is simple being a form of lacing between two stitches the wear and tear on the thread you use is at a minimum this means once you know and understand how the stitch is worked you can easily experiment with a large variety of threads.(Fig 1)

Fig 1



Fly stitch

The fly stitch is an embroidery technique with a characteristic V-shape, which can be worked singularly (detached) or in rows. Each stitch is worked in a V-shape, with the needle/thread emerging at the top left arm of the V and then being inserted at the top of the right arm.The needle/thread then emerges at the base of the V and is pulled through the cloth over the working thread. The loop formed is tied down with a small stitch worked just below the point of the V. This tying ('tacking') stitch may vary in length to produce different effects.Also known as the Y stitch or the open loop stitch.(Fig 2)

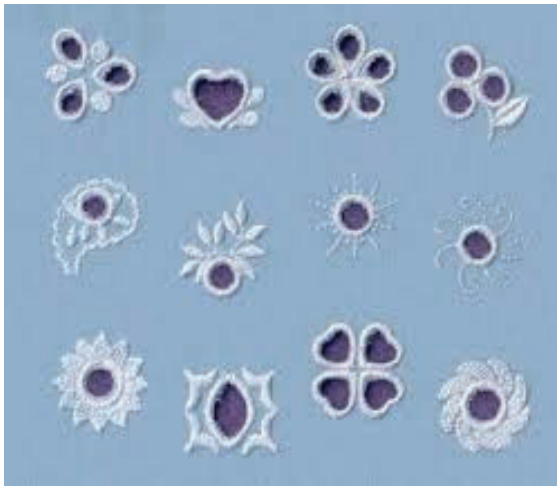
Fig 2



Eyelet hole

The Eyelet Stitch is a decorative stitch that could be sewn alone or combined with rows of other stitches to create unique embellishments. It is often used in hand loom sewing.(Fig 3)

Fig 3



Cut work

Cutwork or cut work, also known as punto tagliato in Italian, is a needlework technique in which portions of a textile, typically cotton or linen,[1] are cut away and the resulting "hole" is reinforced and filled with embroidery or needle lace.(Fig 4).

Fig 4



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Elements and principles of design

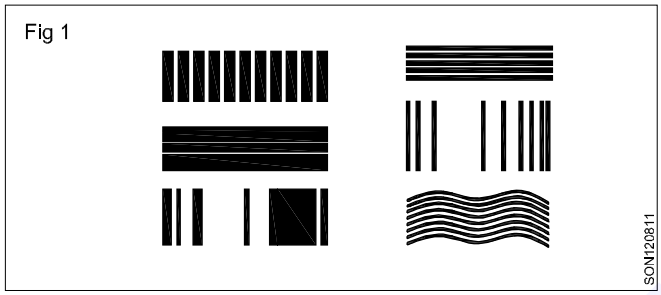
Objectives: At the end of this lesson you shall be able to
- **define designing**
- **explain method elements & principles of designing**
- **describe designs for dresses**
- **choose designs for dresses.**

Elements of Design: Definition

The elements are components or parts which can be isolated and defined in any visual design or work of art. They are the structure of the work, and can carry a wide variety of messages.

Direction of Lines (Fig 1)

Fig 1



Vertical Line

Vertical lines communicate a feeling of loftiness and spirituality.

Horizontal line

Horizontal line suggests a feeling of rest or repose. Objects parallel to the earth are at rest in relation to gravity. Therefore compositions in which horizontal lines dominate tend to be quiet and restful in feeling.

Diagonal Line

Diagonal lines suggest a feeling of movement or direction. Since objects in a diagonal position are unstable in relation to gravity, being neither vertical nor horizontal, they are either about to fall, or are already in motion. Thus if a feeling of movement or speed is desired, or a feeling of activity, diagonal lines can be used.

Curve Line

Curved lines do vary in meaning, however. Soft, shallow curves suggest comfort, safety, familiarity, relaxation. They recall the curves of the human body, and therefore have a pleasing, sensual quality.

Shapes

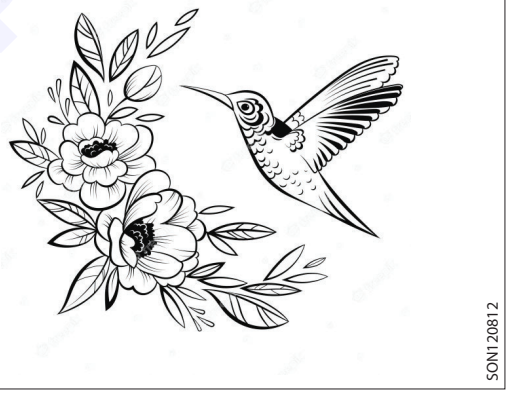
A shape is an enclosed object. Shapes can be created by line, or by color and value changes which define their edges.

Shapes are geometric figures made up of lines in different formation, Shapes give appearance to a fashion figure. It is an important element of a design. The variation in sizes and arrangement of lines and curves form different types of shapes,square,rectangle,triangle,oval,circle are basic shapes used in fashion sketching.

Natural design (Fig 2)

Natural shapes are found in nature or they can be manmade shapes. Leaves are an example of a natural shape. An ink blob is a natural shape. Natural shapes are often irregular and fluid. Natural shapes can add interest and reinforce a theme. Rather than a plain box, frame text with a coiling rope or a spray of leaves or flowers. Use a freeform, non-symmetrical shape to convey a feeling of spontaneity.

Fig 2



Stylized Design (Fig 3)

The Designs which are used to present in a conventional way from natural designs are known as stylized designs. Some abstract shapes are almost universally recognized and easily 'read' even when the text is in an unfamiliar language. The stylized wheelchair, the male and female symbols for restrooms, and the jagged steps for stairs or an escalator are some examples

Geometric Design (Fig 4)

In addition to the basic square, circle, and triangle discussed so far, other geometric shapes have specific meanings, some culturally-based.

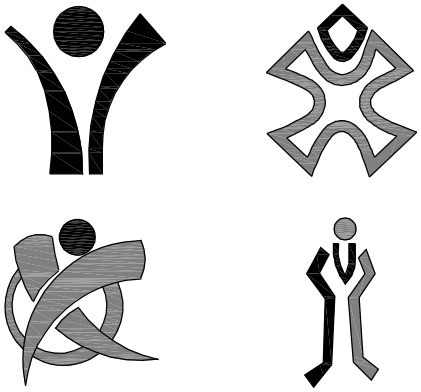
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Fig 3



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Fig 4



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Abstract Design (Fig 5)

Abstract shapes are stylized or simplified versions of natural shapes. A symbol found on signs, such as the stylized wheelchair shape for handicapped access, is one example.

Fig 5



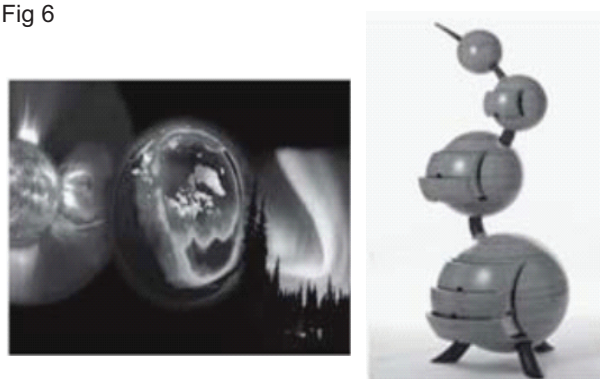
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Illusion (Fig 6)

An illusion is a distortion of the senses, revealing how the brain normally organizes and interprets sensory stimulation.

While illusions distort reality, they are generally shared by most people.[1] Illusions may occur with more of the human senses than vision, but visual illusions, optical illusions, are the most well known and understood. The emphasis on visual illusions occurs because vision often dominates the other senses.

Fig 6



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Space (Fig 7)

In a picture, the shapes that the artist has placed are considered the positive shapes. The spaces around the shapes are the negative spaces.

It is just as important to consider the negative space in a picture as the positive shapes. Sometimes artists create pieces that have no distinction between positive and negative spaces.

Since objects in our environment look smaller when they are farther away, the easiest way to show depth is to vary the size of objects, with closer objects being larger and more distant objects being smaller.

As well, we perceive objects that are higher on the page and smaller as being further away than objects which are in the forefront of a picture. (Fig 7)

Fig 7



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Texture

Texture is the quality of an object which we sense through touch. It exists as a literal surface we can feel, but also as a surface we can see, and imagine the sensation if we feel it.

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Texture can also be portrayed in an image, suggested to the eye which can refer to our memories of surfaces we have touched. So a texture can be imaginary.

Bristly, rough, and hard – this is what we usually think of as texture, but texture can also be smooth, cold and hard, too.

Smooth, soft, and/or warm and Wet or dry are also textures; in fact, any tactile sensation we can imagine is a texture.

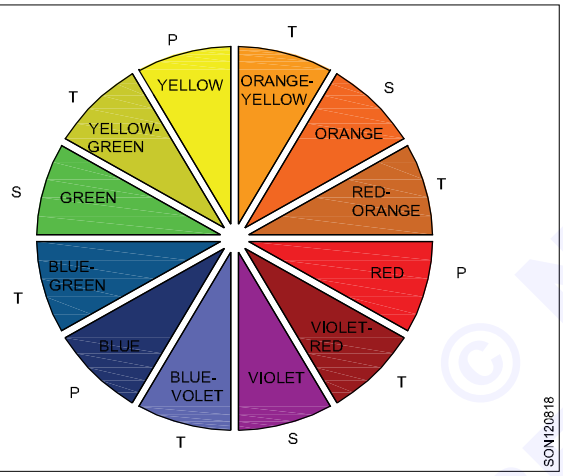
In other words, all surfaces can be described in terms of texture. Many artists and designers make use of texture as a dominant element in their work.

This is particularly evident in craft media, such as fibers, metal, wood and glass, where the tactile qualities of the material are a major feature.

Color, Value and Hue (Fig 8)

Color is one of the most powerful of elements. It has tremendous expressive qualities. Understanding the uses of color is crucial to effective composition in design and the fine arts.

Fig 8



The word color is the general term which applies to the whole subject - red, orange, yellow, green, blue, violet, black and white and all possible combinations thereof.

Hue is the correct word to use to refer to just the pure spectrum colors. Any given color can be described in terms of its value and hue. In addition, the various physical phenomena and psychological effects combine to affect our perceptions of a color.

Colour is an element of design with endless variety. Colour is a mixture of 3 primary colors, red, yellow and blue.

Secondary colours are a mix of any 2 primary colors, orange, green and purple.

Tertiary colours are a mix of the 3 primary colours, red, yellow and blue. Many different colours can be made by changing the amount of primary colours used.

Colour has temperature - reds and oranges feel warm like the sun or desert. Cooler colours like blues and greens go more with water and ice.

Intensity of colour is its strength and purity.

Hue is the quality that separates one colour from another. Tone value is the degree of lightness or darkness of a colour, yellow is light, blue is dark.

Tints are made by adding white to a colour. Shades are made by adding black to a colour.

Principles of design

Harmony

Harmony means pictorial elements of the same type that "go" together.

Harmony can be made where the eye is used to seeing objects together, so they form a group eg. Flower pot and plants. (Fig 9)

Fig 9

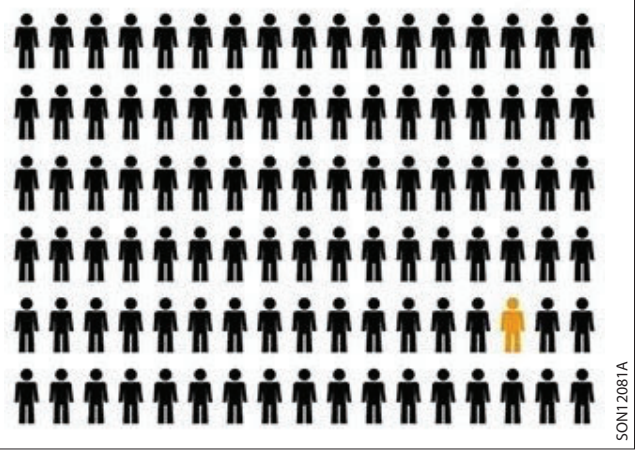


HARMONY can create feelings, similar elements can seem calm and pleasing eg. Blues and greens, rectangles and squares or groups of organic shapes, while contrasting elements create energy, vitality, tension or anger eg. triangles with circles and squares

Emphasis (Fig 10)

Emphasis is the part of the design that catches the viewer's attention. Usually the artist will make one area stand out by contrasting it with other areas. The area will be different in size, color, texture, shape, etc.

Fig 10



Balance

Balance involves the distribution of elements in a work of art.

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Balance is the control of the elements in attracting attention. This attention must be evenly or unevenly spread over the area to make sure interest is kept up, all the way through the art work, without being static or chaotic.

Balance can be symmetrical or asymmetrical

Balance can create movement, tension or calmness.

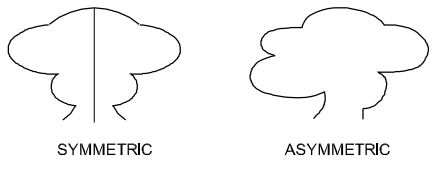
Balance of the pictorial elements can act like a see-saw or lever.

The elements can be balanced around a vertical, horizontal or diagonal

Imbalance/Asymmetrical balance/informal balance (Fig 11)

Asymmetrical, or informal, balance is usually much more interesting than symmetrical balance. In asymmetrical balance the imaginary central pivot point is still presumed to be present; however, instead of mirror images on each side of the picture area, the subject elements are notably different in size, shape, weight, tone, and placement. Balance is established by equalizing the element forces in spite of their differences

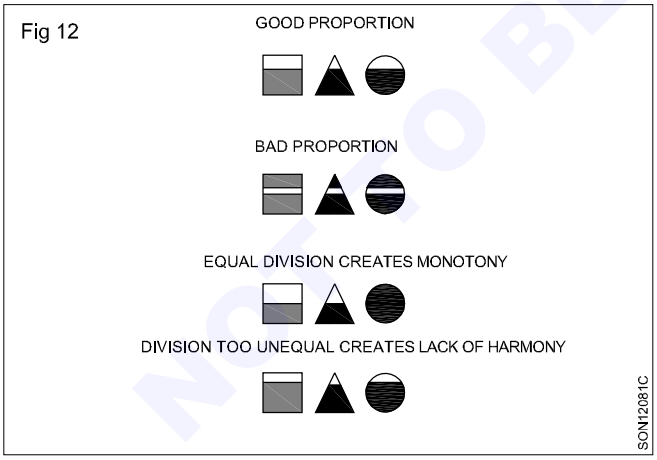
Fig 11



Proportion (Fig 12)

Proportion is the feeling of unity created when all parts (sizes, amounts, or number) relate well with each other. When drawing the human figure, proportion can refer to the size of the head compared to the rest of the body.

Fig 12



PROPORTION involves the relationship between sizes - scale.

PROPORTION is about realistic relationship or ratio. As an illustration, the ideal human proportion is eight heads high and the shoulders are two heads wide so artists can change these relationships or proportions for dramatic or comic effect or to emphasize a feature or quality. In cartoons the head and hands are emphasized by enlarging them beyond realistic scale.

PROPORTION is familiar to us all so artists can use the warping or normal proportions to suggest emotions or affect the status of a subject.

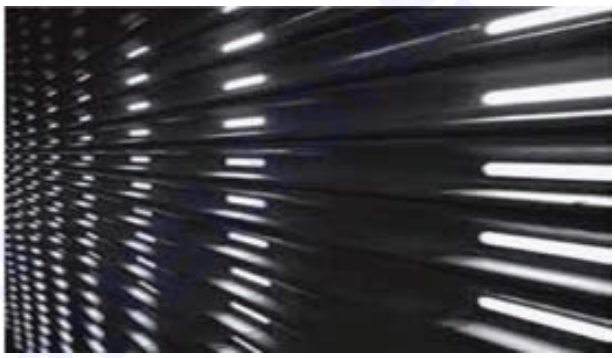
Rhythm

Rhythm is created when one or more elements of design are used repeatedly to create a feeling of organized movement. Variety is essential to keep rhythm exciting and active, and moving the viewer around the artwork. Rhythm creates a mood like music or dancing.

Rhythm through Lines (Fig 13)

RHYTHM is about the rate the eye moves throughout the work of art. This is usually because the eye moves, jumps or slides from one similar element to another in a way similar to music.

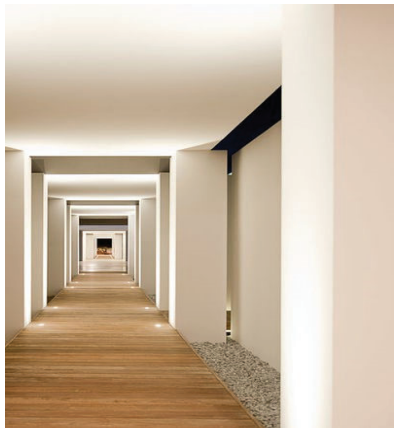
Fig 13



Rhythm through Gradation (Fig 14)

Rhythm may be in the form of GRADATION where the repeated elements slowly become smaller or larger.

Fig 14



Rhythm through Progression (Fig 15)

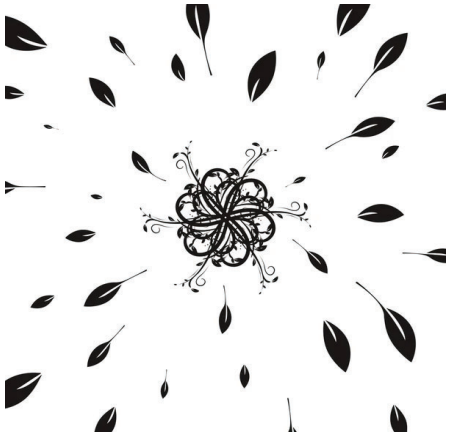
The designs when it is progressed by any form of size, color or shape repetitively then it is called rhythm through progression.

Rhythm through Repetition

REPETITION is the use of similar or connected pictorial elements. For example, similar shapes, colors or lines that are used more than once.

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Fig 15



SON12081F

Unity (Fig 16): Unity discusses the need to tie the various elements of a work of art together. Unity is a measure of how the elements of a page seem to fit together - to belong together. A unified work of art represents first a whole, then the sum of its parts.

Ways to achieve unity

Proximity

The simplest method of making objects appear to belong together is to group them closely together. This allows us to see a pattern.

Repetition

Another method often used to promote unity is the use of repetition. Repetition of color, shape, texture or object can be used to tie a work together.

Continuation

A much more subtle method of unifying a work involves the continuation of line, edge or direction from one area to another.

Fig 16



SON12081G

Drawing tools and different types of lines

Objectives: At the end of this lesson you shall be able to

- **explain the method of using tools for drawing**
- **explain precaution for drawing**
- **demonstrate the usage of lines in his design.**

Pencil: A pencil is a writing implement or art medium usually constructed of a narrow, solid pigment core inside a protective casing. The case prevents the core from breaking, and also from marking the user's hand during use.

Scale: A ruler-like device which facilitates the production of technical drawings

Pencil Drawing and Mark-Making (Fig 1)

Fig 1



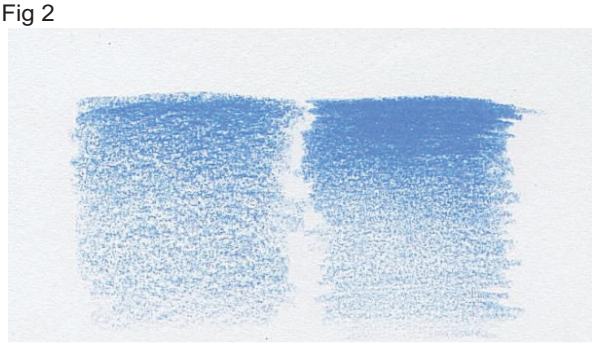
SON120821

In this pencil drawing lesson, we'll focus on the importance of mark-making. Mark-making is the expression we use to describe the process of applying pencil to paper. You can improve your pencil drawing skills by carefully considering your pencil and how it hits the page.

Shading using normal pencil: Controlling and exploiting the possibilities of the mark is an important step in developing as an artist.

Color Pencils (Fig 2): This introduces some basic color pencil strokes which will be useful in your drawing. It is a good idea to spend some time exploring the color pencil medium with small pieces before attempting a major drawing.

Fig 2



SON120822

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As with graphite pencil, there are a range of techniques which you can employ when drawing with colored pencil. Which one you choose will depend on the final effect you are aiming to achieve

Shading: Using a straightforward side-to-side shading motion, a smooth even layer of color is built up. A very light touch can be used to deposit the faintest amount of pigment for graduated shading.

Hatching: Rapid, regular, evenly spaced lines are drawn, leaving a little white paper or underlying color showing.

Cross-Hatching: Hatching overlaid at right-angles. This can be done with different colors, or carried through multiple layers, to create a textured effect.

Scumbling (Fig 3)

The 'brillo pad' method, tiny overlapping circles rapidly drawn. Again, it can be used to build up a single color or different colors.

Fig 3



Directional Marks: Short directional lines which follow a contour, or the direction of hair or grass or other surfaces. These can be densely overlaid to form a rich textural effect.

Incised Marks: Incised Marks: Two thick layers of color are overlaid, then the top color gently scratched into with a blade or pin to let the lower layer show through.

Burnishing : Burnishing is simply layers of colored pencil overlaid with strong pressure so that the tooth of the paper is filled and a smooth surface results. This image shows a burnished surface compared with a basic overlay of color. With some colors, especially with waxier pencils than the watercolor pencils used for this example, a quite translucent and jewel-like effect can be obtained with careful burnishing.

Standard Precautions for Drawing

- Sharpen your pencil before drawing
- Be clear about the image to get the exact effect
- Use a support under the sheet while drawing to avoid disturbances
- Get branded pencils to avoid breakage of pencil and pencil nibs.

Understand Basic Drawing Techniques

Drawing is a form of visual art that makes use of any number of drawing instruments to mark a two-dimensional medium.

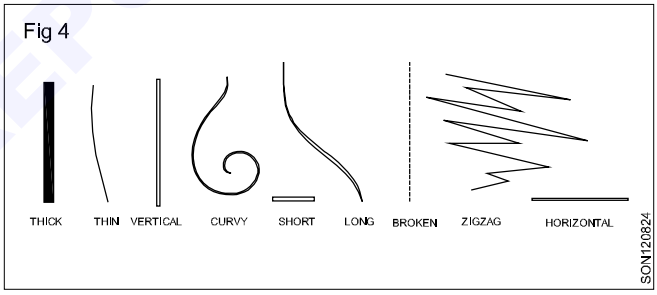
Instruments used include graphite pencils, pen and ink, inked brushes, wax color pencils, crayons, charcoal, chalk, pastels, various kinds of erasers, markers, styluses, and various metals (such as silverpoint). An artist who practices or works in drawing may be called a draftsman or draughtsman.

A small amount of material is released onto a surface, leaving a visible mark. The most common support for drawing is paper, although other materials, such as cardboard, plastic, leather, canvas, and board, may be used.

Temporary drawings may be made on a blackboard or whiteboard or indeed almost anything. The medium has been a popular and fundamental means of public expression throughout human history. It is one of the simplest and most efficient means of communicating visual ideas. The wide availability of drawing instruments makes drawing one of the most common artistic activities.

There are several categories of drawing, including figure drawing, cartooning, doodling and shading. There are also many drawing methods, such as line drawing, stippling, shading, etc., (Fig 4)

Fig 4



Line is the most basic design 'tool'. A line has length, width, tone, and texture. It may divide space, define a form, describe contour and suggest direction.

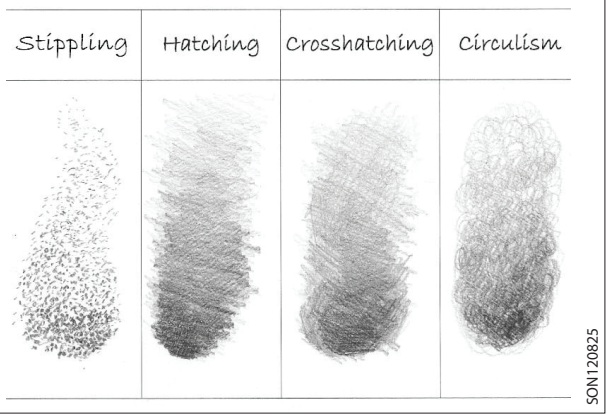
Shading & Lighting: Shading refers to depicting depth perception in 3D models or illustrations by varying levels of darkness. Shading is a process used in drawing for depicting levels of darkness on paper by applying media more densely or with a darker shade for darker areas, and less densely or with a lighter shade for lighter areas.

There are various techniques of shading including cross hatching where perpendicular lines of varying closeness are drawn in a grid pattern to shade an area. The closer the lines are together, the darker the area appears. Likewise, the farther apart the lines are, the lighter the area appears.

Light patterns, such as objects having light and shaded areas, help when creating the illusion of depth on paper. (Fig 5)

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Fig 5



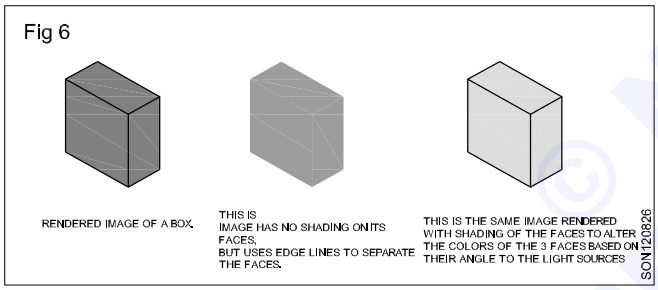
Shading alters the colors of faces in a 3D model based on the angle of the surface to a light source or light sources.

The first image below has the faces of the box rendered, but all in the same color. Edge lines have been rendered here as well which makes the image easier to see.

The second image is the same model rendered without edge lines. It is difficult to tell where one face of the box ends and the next begins.

The third image has shading enabled, which makes the image more realistic and makes it easier to see which face is which. (Fig 6)

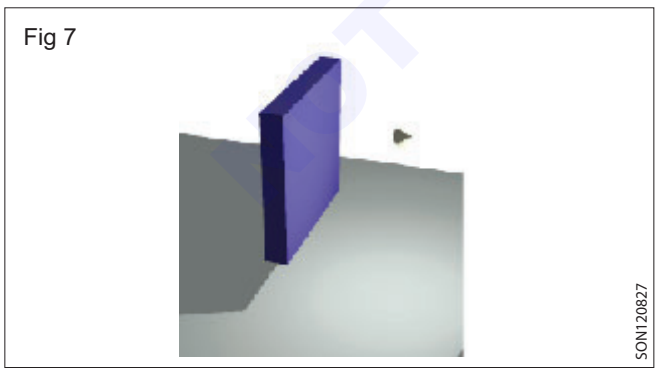
Fig 6



Lighting (Fig 7)

Shading is also dependant on the lighting used. Usually, upon rendering a scene a number of different lighting techniques will be used to make the rendering look more realistic. Different types of light sources are used to give different effects.

Fig 7



Drawing lines

Lines drawing and painting colours are the two very important steps towards sketching. Constant practice of drawing lines and curves gives confidence to the student in sketching. Painting stocks on the paper on the colour wheel will give a knowledge of colour itself and learn the combination of colour.

This lesson will help the student to implement his ideas with lines and colours in this designing.

To start with this lesson a student has to practice drawing lines and constantly being corrected by the instructor which will take him on the right way.

Lines provide a visual dimension of length and width. Lines offered a path of vision. When a (person)(customer) wears an outfit.

Types of lines are:

Horizontal lines

Vertical lines

Diagonal lines

Curved lines

Horizontal lines:

These lines add width of the garments and cut the height.

Example:

A wide contrast belt with shorten the height of the figure by divide the garment (dress) into two segments. But wearing a self colour belt will not give this effect. This trends to show tall person short.

Vertical lines:

These lines add height to the garment and cut the width. A contrast colour vertical band in the centre front or from the shoulder till the neckline gives an added height to the outfit. This trends to show short person to tall.

Diagonal line:

These lines add or cut the height depending on their slope. These lines direct the vision through the diagonal weaves or prints which makes the figure slim.

Curve line:

This line reflects the shape of a natural body. Curve lines shows both slim and bulkiness of a design or body. These curved lines also shown in circular motion or way appear slightly straight. These lines give gracefulness to the eye when seen. Most of the curves lines can be seen on diagonal direction denoting(showing)folds(pleats)ruffles (frill) drape(tall of fabric on a dummy).

The way of arranging vertical ,horizontal, diagonal, curve lines creates movements like opposition, transition, radiation.

When in designing or drawing, oblique lines are used which is the combination of Horizontal and Vertical lines.

Curve line drawing give the effect of transition. When a line slips through another transition is seen.

Collar with Pin tuck stitches (Fig 8)

When lines highlights the stitching or folds, drapes, it gives the effect of radiation(attract attention).

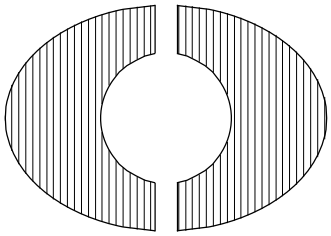
Line provides a path which the eye travels. The objective of this Lesson is how to use lines and to show what type of human body, curve lines shows naturally human body,

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Vertical lines slimes the human body, Horizontal lines bulk the human body.

Designing in organising or creating a design to communicate an innovative idea. In this field clothing in divided into two division.

Fig 8



COLLER WITH PIN DUCK STITCH

SON120828

Structural Designing

Decorative designing

These are the factors designing.

Structural Design:

This defines the garment designed. Different part of a garment in drawn separately to make sample pattern in the industry by the pattern master. This work is done by the designer in the buying house which specifies the construction, colour, thread, trimming and measurement, cuts used. This system in used in industry.

Decorative design:

This defines the garment detail which in designed in boutique (shop) which is custom made or one to one required design. Specification of this design is not prepared and standard measurements are not used. This is made for an individual.

Forms and geometrical drawings

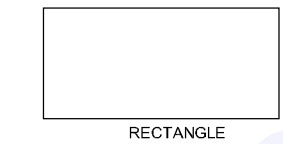
Objectives: At the end of this lesson you shall be able to

- **state the features of form**
- **list out the types and application of forms in designing**
- **state the different types of form used in geometrical drawing.**

Type of Forms

Forms are of various types. In the art of drawing, only the following five forms are used in designing basically With these basic forms as axis, many other forms like polygon, oval, cubical, cylindrical etc are prepared/ designed (Fig 1).

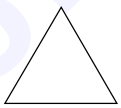
Fig 1



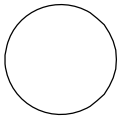
RECTANGLE



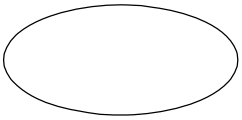
SQUARE



TRIANGLE



CIRCULAR



ELLIPTICAL

SON120831

These five basic forms also act as the base for non-geometric designs when they are used as per requirement. Various designs can be drawn with the help of these forms and shapes.

Application of Forms

Application of forms in designing is an important feature of the design. Placing the perfect form at suitable position in a design gives a perfect finishing. When a design/ form is misplaced or imperfect, the effect of the entire design gets spoiled. The design selected to be drawn, should be analyzed and arrived at and identified the forms in the design. It should be presented/ drawn with all its requisite mixed at proportionate ratios.

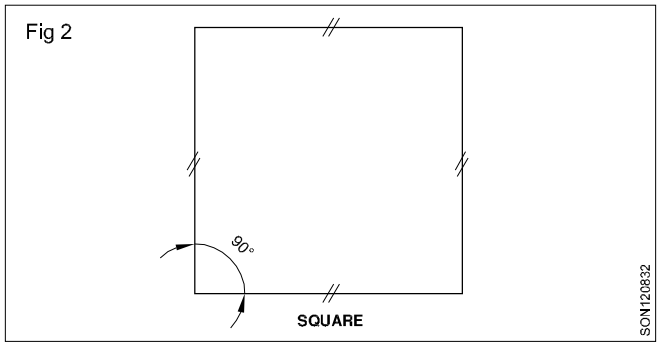
- All the fabrics and garments made with plain, stripes, checks, natural, animal and fruit designs. The designs are used in different occasion like marriage, birthday party, uniforms and festivals straight lines and strong angles of geometric shapes convey stability, power and confidence. Curved shapes convey feminity and confidence. Unequal geometric shapes have more interest. Shape is a space enclosed by lines, e.g. a silhouette is the outer shape of the garment. A shape features in the garment structural and decorative feature of the garment. The basic shapes are natural, geometrical and abstract.
- Fabrics and garments are used by the people having different types of human figure structure.

  Therefore a designer must understand the different types of forms while drawing a design for fabric/ garment according to the uses and structure (Physical appearance) of the body of a person.

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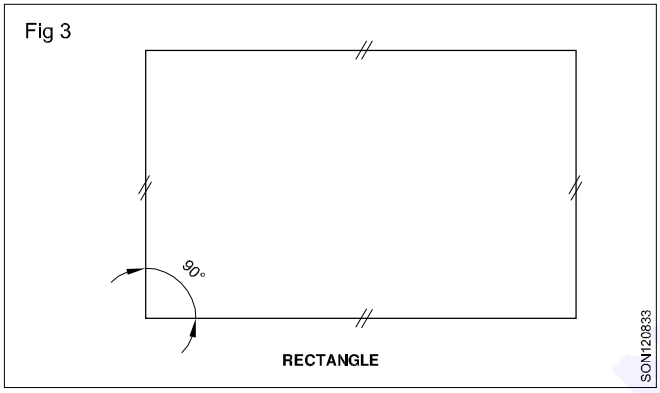
Square (Fig 2)

A flat shape with four sides are in equal length and corners angles are 90°.



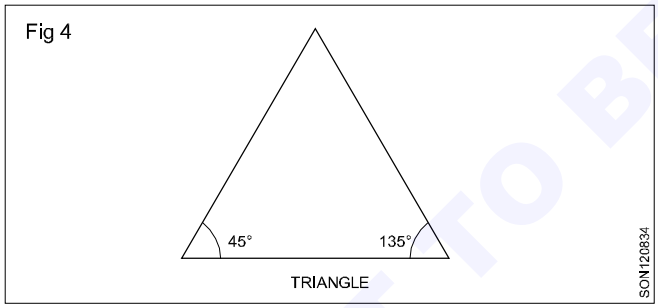
Rectangle (Fig 3)

A flat shape with four corners 90° angles and four sides, in which opposite sides of equal length.



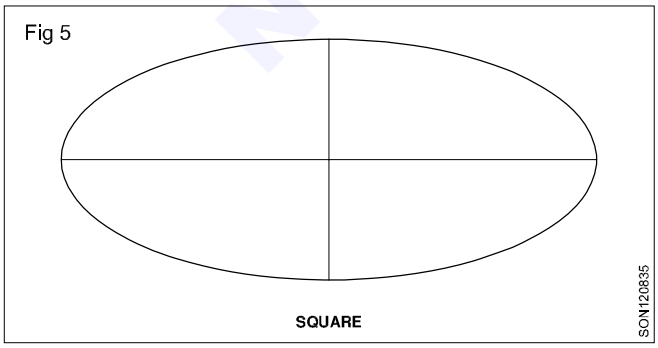
Triangle (Fig 4)

A flat shape with straight three sides



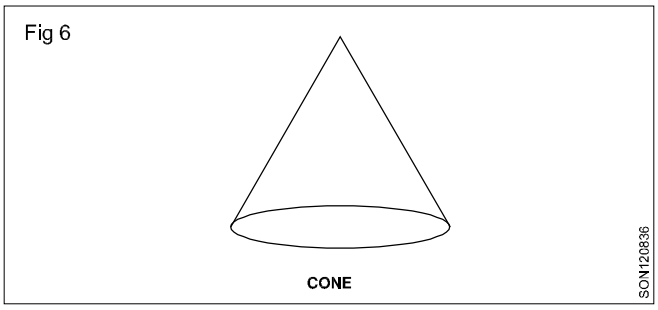
Ellipse (Fig 5)

An oval or a flattened circle.



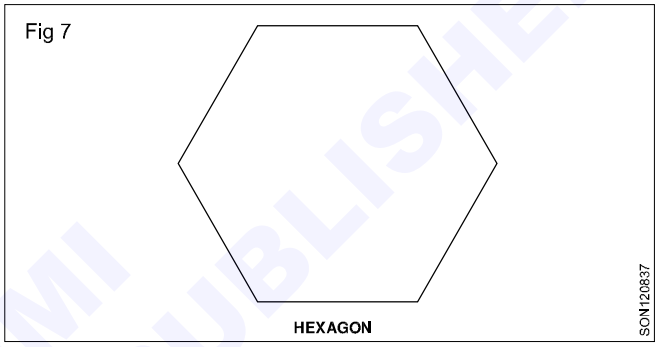
Cone (Fig 6)

A shape with a flat round or oval base and a top which narrows to a point



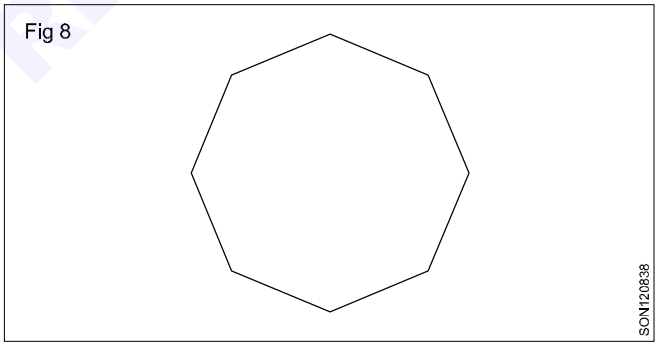
Hexagon (Fig 7)

A shape which has six straight sides is hexagonal. All the sides are equal.



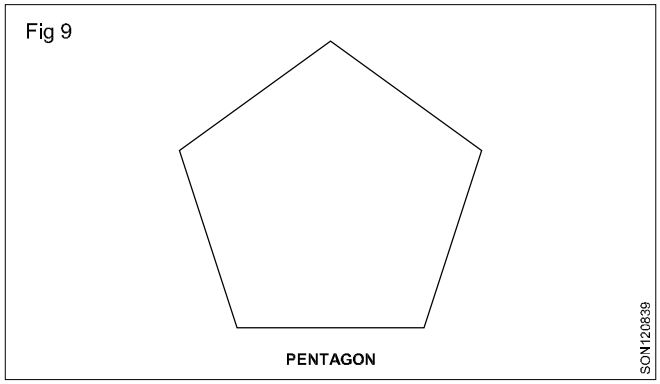
Octagon (Fig 8)

A flat eight sided shape. All the sides are equal.



Pentagon (Fig 9)

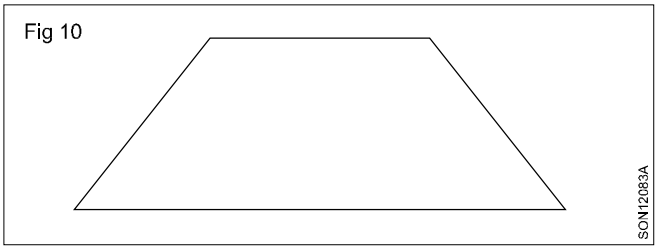
Five-sided shape with five angles.



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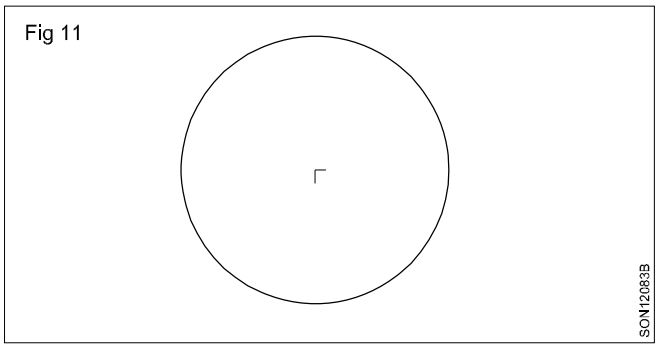
Trapezium (Fig 10)

A flat four sides shape where two of the sides are parallel.



Circle (Fig 11)

A continuous curved line, the point of which are always the same distance away from the fixed centre point.



Shapes and designs

Objectives: At the end of this lesson you shall be able to
- **explain about shapes**
- **explain about designs**
- **explain creating of design.**

Shape

Shapes are geometric figures made up of lines in different formations. Shapes give appearance to a fashion figure. It is an important element of a design. The variation in size and arrangement of lines and curves forms different types of shapes. Square, rectangle, triangle, oval circle are basic shapes used in fashion sketching.

Designs

Designs are the forms of shapes and sizes in appropriate proportions as suitable for the requirement. There are different types of designs, stylized designs, abstract designs etc., The design to be sketched is based on its purpose. Line, shape, color, tone, texture, direction, size, mass are the basic elements of a design.

Creating a design

The key for a good design development is good research material that actually means something special for the purpose. As the designing process continues different skills are required and personnel judgment, decision making, is needed to select ideas that need to be developed. Starting to collect required material will provide a focus for your thoughts and material from which to start generating ideas. Collection of colour schemes, articles, sketches, it can be come from anywhere can be completely original and connected to the designer in a very individualistic way, or can be the current trends.

Sources of Inspiration

Sources of design inspiration are a very important for any designing. Garments are sold on their visual and tactile appearance. A design should be like that it could catch the mood of the season. Fashion changes very quickly and so the designers must know the sources of design inspiration.

"Anything visual cab be source of inspiration for a design".

Different sources of inspiration

The use of source of inspiration is entirely pragmatic. 25 is possible to identify different types of sources of inspiration.Which are the follows.

It is possible to identify types of sources inspiration performing different role

1 Garments

Designers attend fashion shows and visits many places by attending the fashion shows they also study competition garments to gauze their own designs and extract information about production methods. In the course of studying garments designers recognise shape details and motifs as prominent in season and apply them in their new designs.

2 Photographs of garments

All designers study fashion photographs in magazines it provides is a real and clean indication of the mood of the garments in the fashion photographs enables the designers to understand the collection and future demand of taste.

3 Artefacts and images

Designers look for repeat patterns ornaments and motifs. They provide rich sources of ornamental patterns for e.g embroideries rugs or tie patterns.

All other designs objects like tiles mosaic also serves as good sources of inspiration.

4 Design Books

Designers also use art and design books frequently . Designers also collect some copyrite the books series

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with hundred of pictures of the same type of object.

5 Natural objects

Many themes take their inspiration from Nature. Designers are inspired by animals birds , plant and other natural objects.

Natural phenomenon's such as sunsets, thunder etc are also for designing.

Designers never stop looking for sources of design inspiration when they see something suitably they turn into a design.

6 Patterns of variation is also used as source of inspiration.

7 Role of sources of inspiration of design can be summarised as:

a Contest of the fashion of a seam.

b Illustration of concepts

c Sources of design features.

d Sources of particular design.

e Colour schemes

f Co-ordination of collection. (Fig 4)

Anything visual can be source of design inspiration .25 is a process through the design..

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Color Theory

Objective: At the end of this lesson you shall be able to
- **state about the color.**

Colour

The life giving element in fashion designing. Colours play a very important part in human life. Choosing effective colour scheme is more important.

Colours have to balance the harmony and rhythm in the design to give proportionate effect on a design. They make a design attractive and lively and various emotion and feeling can be expressed by colours.

Colours give both physical and psychological effect to the eye.

There are some colour which are associated with emotion such as-

Red

Colour of blood, flame, and symbol of love when we come in contact of red it is attractive and it speeds up the body's metabolism.

Red is preferred colour indicated on valentine's day some arranged function specious items (kumkum, bangles, beads chain)

Yellow

Gives happiness, sunshine, flowers, and cheerfulness. Colour of spring .When your friend or you say are emotionally sad that when you see yellow than your mind stabilizer.

Green

Tranquil and colour of tree and grass (fertility) gives life. This colour is also dangerous because it is colour of poison and jealousy (felling bad for somebody) Olive green gives a sophisticated (elegant) look only to some people.

Blue

Colour of sky sea. Light blue gives a younger look .Dark blue has a dignified look.

Purple

An elegant colour used by royal people, fashionable colour used informal evening wear. Though it is an artificial colour the lighter shades of purple is used for women wear.

Brown

Soil and rich fertile gives sad and wistful feeling (day feeling). It can be a romantic colour if used colourfully while designing.

White

Denote purity, innocence, peace this colour denote with winter but use of this colour in large scale given depression.

Black

Night, death, evil, black magic, orthodox colour an elegant colour for party and evening wear, the light colour for winter.

(list the other reasons and uses of the above given colours).

Colour is divided into 3 elements (dimensions)

Hue, value, intensity

Hue

Another name for colour.

Value

Lightness or darkness of a colour.

Intensity

Brightness or dullness of colour.

Color wheel

Objective: At the end of this lesson you shall be able to
- **explain the color wheel.**

Colour Wheel

Colour wheel has 12 colours and main or key colours on the wheel are primary colour,

Secondary colour, tertiary colours. This colours are used to establish their relationship with each other.

What is Primary colour ?

Primary colour are natural colours which cannot be got by mixing any colour. They are Red Yellow, Blue.

How do you get secondary colour ?

When two primary colour are mixed in equal proportions we get secondary colour.

- Red (1 drop) + Yellow (1drop) = Orange
- Yellow (1drop) + Blue (1drop) = Green
- Blue (1drop) + Red (1drop) = Violet.

How do you get tertiary colour?

Mixing of one primary with secondary gives tertiary colours.

Mixing colours with proportion

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– Red (2 drop) + Yellow (1drop) = Red Orange

– Yellow (2 drop) +Red (1 drop) = Yellow Orange

This stage we can see the family colour of Red.

(Red, Reddish orange, Orange, Yello wish Orange, Yellow).

- Yellow (2 drop) + Blue (1drop) = Yellow green

- Blue (2 drop) + Yellow (1 drop) = Blue green

There we see the family of green

(Yellow, Light green, green, Blue ,Green, Blue)

– Blue (2 drop) + Red (1 drop) = Blue violet

– Red (2 drop) + Blue (1 drop) = Red violet.

We also get to see the family of Blue

(Blue, Royal Blue, Violet, Purple, Red)

Mixing of colour must be proper given proposition which will give the actual colour.

What is Value ?

When white colour or black colour is added to the natural colour we get to see lighter or darker shades of one colour.

(Take one colour of your choice from the colour wheel, start adding small drops of white colour to the natural colour step by step fill you gets white colours.

We can see the difference of one colour step by step from natural to white).

On the colour wheel

When all the 12 colours are painted it is divided into 2 as warm colours and cool colours.

Warm colours are from purple to yellow and cool colours are from light green to violet.

Warm colours are used in winter season reason these colours keep you warm in cold weather. Cool colour are used in summer season reason these colours keeps you cool in sunny weather.

Colour schemes or relation:

Selecting of 2 colour that are equally place on the colour wheel are called Diad colour .

Example:

- Red with orange
- Yellow with green
- Blue with violet
- Selecting of 3 colour that are placed equally on the colour wheel is called Triad colour.

Example:

Red, yellow, blue, orange, green, violet.

Selecting of 4 colour or more on the colour wheel is called tetrad.

Combination of one colour with the opposite colour is called Complementary colour.

Example:

Orange and blue

Yellow and violet

Green and purple.

Choosing of four colour on the wheel in split complimentary color

Example:

Yellow with yellow green

Blue violet with violet.

Colours without colour or natural colour are Achromatic colour

Example :

White, Black, grey

Using various value and intensity of a colour is Monocromatic colour.

What is the quality of colour?

The combination of light, dark of a colour is called as quality of colour.

1 Tone

2 Light colour

3 Dull colour

4 Dark colour

5 Vivid colour

Tones:

Mixing white or black to the base or natural colour this give the brightness to a colour . It dullness to a colour has to be given then grey(combination of black and white together) should be added to the natural colour.

Light colour:

Mixing white with natural colour. Here you can see the lighter shades of a colour. You can find these lighter colour in the women collection of dresses.

But these colours denote catch the eyes, but have their own vale in the group of colour scheme.

Dull colour:

Reducing the brightness of a colour by adding grey to the natural colour. These colours reduce tension. Adding of less grey gives diffuse or blue effect and adding more of grey gives muddy effects.

Dark colour:

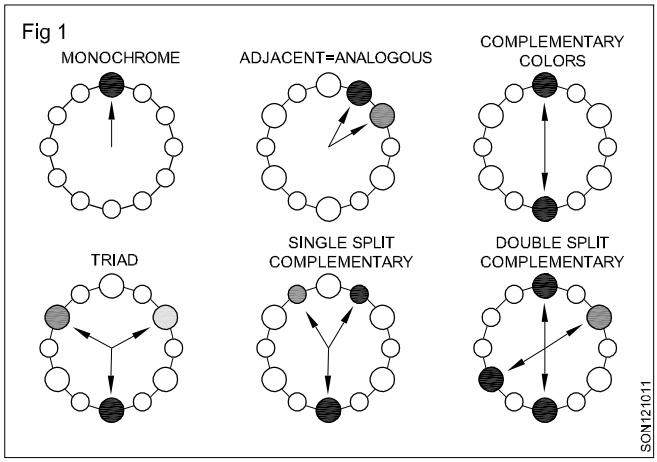
Dark colours relate to royalty .Adding of black give weight to the colour and the dress. Most of the gents/men's wear have these colours. We can see in suits and formal wear. When lighter colour are paired or combined with this dark colour it is more conventional and comfortable in use.

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Color schemes

Objective: At the end of this lesson you shall be able to
- **explain feature of color harmonies.**

Color Schemes (Color Harmonies)



Monochrome (meaning "one color") color harmonies include only one color in different value (i.e.) the lightness and darkness of a color and intensity (i.e.) the brightness or dullness of a color. An example of a monochrome color scheme includes any color mixed with white, gray, or black. For example, red, rose and pink (red mixed with white) are monochrome.

Adjacent colors are also known as called analogous colors. They uses colors that are adjacent to each other on the color wheel. An example is a color scheme that includes various values and intensities of blue and violet.

Complimentary colors are the colors opposite each other on the color wheel. For example, violet and yellow, red and green, and blue and orange are examples of complimentary colors.

A single split complement uses a primary color with colors on either side of its complement. An example is a color scheme that includes various values and intensities of violet, yellow - green and orange - yellow.

A triad uses the colors at the points of an equilateral triangle (i.e.) three colors spaced equally on the color wheel. These are also known as balanced colors. An example of a triadic scheme could be red, blue, and yellow; green, orange, and purple, etc.

A double split complement are also called tetradic, uses two pairs of complements, one apart on the color wheel. An example is red, green, orange, and blue.

Warm Colors and Cool Colors

The warm colors include reds, oranges, and yellows, these colors create the feeling of being closer; the cool colors include blues, greens and violets, these colors have a tendency to feel like they are receding or backing away from you and they create cool tones.

Color schemes

Monochromatic color scheme

A monochromatic color scheme uses a single color mostly. In this type of scheme, various darker shades, grayer tones, and tints of the main color may be included in coloring. In addition, the one color is often paired with white or another neutral.

Analogous color scheme

Analogous colors are colors that are adjacent to each other on the color wheel. Some examples are green, yellow green, and yellow or red, orange and yellow. This color scheme is often found in nature and are pleasing to the eye. The combination of analogous colors give a bright and cheery effect to the design. When using the analogous color scheme, one should make sure there is one hue as the main color.

Complementary color scheme

Colors that are opposite each other on the color wheel, such as blue and orange, red and green, purple and yellow. Complementary color schemes creates a more energetic feel. The high contrast between the colors creates a vibrant look.

Split-complementary color scheme

A color scheme that includes a main color and the two colors on each side of its complementary (opposite) color on the color wheel. These are the colors that are one hue and two equally spaced from its complement. To avoid fatigue and maintain high contrast, this color scheme should be used when giving power point presentations, or when using a computer for an extended period of time. Additionally, certain colors should not be mixed, like red and green. Colors that should be used are red/purple and yellow/green.

Tetradic color scheme

Tetrads or quadrates is the color scheme of any four colors with a logical relationship on the color wheel, such as double complements.

Neutral color scheme

A color scheme that includes only those colors that are not found on the color wheel are known as neutrals. Beige, brown, white, black, and gray are the examples of neutral colors.

Warm and Cool Color Schemes

A color scheme that does not include blue at all its Warm color scheme. Where as, the color scheme that do not include red at all is known as cool color scheme.

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Grey colours

Objectives: At the end of this lesson you shall be able to
- **define white and black colour.**
- **explain grey colour using by white and black colour.**

Black colour

Night, death, evil, black magic, orthodox colour on elegant colour for party and evening wear. The right colour for winter.

White colour :

Denotes purity, innocence, peace, this colour denotes with winter but use of this colour in large scale given depression.

When white colour or black colour is added to the natural colour we get to the lighter or darker shades of one colour black + white = grey color.

Black, white and grey are not true colours. They are considered to be neutral a chromatic colours.

Light colours or Grey colour:

Mixing white with black colour. Here you can see the lighter shades of a colour. you can find these grey colour in the dress

Psychological aspects of colour

Objective: At the end of this lesson you shall be able to
- **explain the psychological aspects of colours.**

1 Tone

2 Light colour

3 Dull colour

4 Dark colour

5 Vivid colour

Tone: Mixing black and white with basic or natural colours is called brightness. We need to mix gray with natural colour to get dullness.

Light colours: Mixing whiteness with the natural colour gives light colours. Here we can see many shades of light colours. Similar colours are found in clothing of women. This colour has a unique value in the colour scheme.

Dull Colour: It is a mixture of grey colour to reduce the brightness of the colour. These colours reduce tension. Mixing of grey colour in a less quantity gives blue colour appearance and mixing of grey in large quantity gives soil like texture.

Dark colour: Dark colours belong to the monarchy style of fashion. Adding black colour increases the value of colour and clothing. It is seen in both male and female clothing. These colours can be seen in men and women's formal clothing and suits. Combining light colours with these colours give a comfortable and casual appearance too.

Vivid colours: Vivid colours are also called dazzling colours. They are extremely bright and powerful. People who wear clothes of such colours will stand out from the crowd. For example, orange and blue

Violet and yellow

Green and purple

The use of four consecutive colours in colour wheel is called Analogous colour. For example, red, red-orange, orange, yellow-orange.

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Enlargement and reduction of designs

Objectives: At the end of this lesson you shall be able to
- **state the features of enlargement and reduction of designs**
- **state the principles of making the design.**

Designing is an art of expressing a value in a definite form. A design consists of various features and factors to be considered while designing. A design may be a geometrical or non-geometrical pattern. At every place of its application, the size of the design plays an important role.

When the design drawn is all perfect in its every aspect but fails to satisfy the required size, it is of no use to convey its purpose. Thus, the design selected can be either enlarged or reduced as required to suit the purpose.

Enlarging or reducing a design is done following a definite method. The design choosen is first viewed and analzsed to decide upon either to enlarge or reduce it. The required size of the design is finalised. The original design is then worked out to enlarge/ reduce it proportionately.

The design is enlarged/ reduced using measurements of increased (enlarge) or decreased (reduce) size. The original design is measured and the ratio at which it should be enlarged/ reduced is found out and changed.

Resizing by scanner and printer

Resizing and cropping are two of the most basic image editing functions. Both require careful consideration as they can affect image quality. Resizing changes the dimensions of the image, which usually affects the file size (and, thereby, image quality). Cropping always involves cutting away part of the original image and results in some of the pixels being discarded.

Resizing

There are plenty of reasons to resize images, the most common being reducing the size of large files to make them easier to email or share online. Many cameras can do this in-camera but it's easy to accomplish with basic image editors and there are plenty to be found via a web search. Resizing requires a great deal of care.

Excessive resizing can affect image quality

Resizing can go in two ways to make images smaller or larger. Making images smaller simply discards pixels. Making them larger adds pixels, which can result in a loss of quality. Excessive enlargement will produce blocky-looking and/or fuzzy pictures.

Each pixel in a digital image has a particular brightness level, colour and specific location within the frame. When you reduce the size of an image, these pixels are reduced in size and some will be discarded, using a process known as 'compression'. Enlarging the image makes each pixel larger and eventually you will reach a stage where individual pixels appear as little boxes.

The effects of upsizing and downsizing depend on how much data you start with, which depends on the file format used to store the digital image.

The default file format for all cameras is JPEG, which itself compresses images to make them easier to store and share. Cameras that support raw file capture can provide compressed or uncompressed options but both will be much larger than JPEGs. So, if you want to use your images online, it's best to start with JPEGs.

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Introduction, development and drawing of design (Border, Spray Corner, Centre links)

Objective: At the end of this lesson you shall be able to
- **explain about the development of border designs.**

The nature of fabric

The fabric that we choose to make floral designs must be very thin, shiny to look at. We must not buy clothes that have more colour and dye. The colour may vanish gradually when we wash those clothes. The fabric must be chosen in such a way that they suit the floral design. We should not buy fabric that shrinks as it is washed. If we do the floral design without understanding the nature of fabric, then the work that we do will be useless. Moreover, the fabric should be free of stains or damages when purchased.

Some types of fabric are compressible in water, so we need to soak the fabric in water before making the floral work.

Ironing the cloth

The fabric that we choose for the floral design must be ironed before making the design as well as floral work. Even after the flower work is done, the fabric must be ironed to make it look more beautiful.

We need to select the fabric for the floral design. For example, we need to buy table cloth, satin bobbles and casement. We need to use the fabric according to its nature.

Shadow work can be done on the thin Organdy fabric and cross stitch can be sewn on Matty (Natti) material.

Adjusting the design

Changing the design of the fabric in the floral work is the main job. While changing the design, we have to change it according to the nature of fabric.

Dragging on the frame

Only if the tensile strength of the fabric is appropriate while doing the floral work, then we could do beautiful floral work. If the tensile strength is not apt, then the floral work will shrink. If the force of traction is more, then the thin material will tear. Therefore, the traction should be adjusted according to the type of fabric. Always make sure to thread the needle only as required.

Drawing border design

Draw a thin line from the hem of the sari to two inches. Use the appropriate processing method to draw designs over the line. The design could be thin border or large border, starting from the bottom of the sari towards the top portion in a shape . When we draw design in this way, after the floral work is done, the bottom portion of the saree looks beautiful with floral work all over.

Table cloth border designing

Draw a four inch or five inch line on both sides of the sample and draw outline. Draw border on the top of the line. The design should be drawn using the appropriate method for the fabric.

Spray Design and Corner design

Objectives: At the end of this lesson you shall be able to
- **explain spray design**
- **explain corner design.**

Spray Corner: Spray - a unit when kept horizontally and vertically over the entire garment at an equal distance is called as spray structure. This type of structure is used in ladies suits, Kurta and Sari.

Saree: The saree is designed to be evenly spaced all over the design in a similar spray-like pattern. This spray design is filled all over the saree,

Table cloth: The design is spread evenly all over the table cloth.

Fig 1



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Fig 2



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Corner: The design on the edge of the table cloth is called the corner design. The design can be found in all the four corners of the tablecloth.

Fig 3



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Hand kerchief: The handkerchief has design at all four corners.

Fig 4



SON121214

Fig 5



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Center Design and Link design

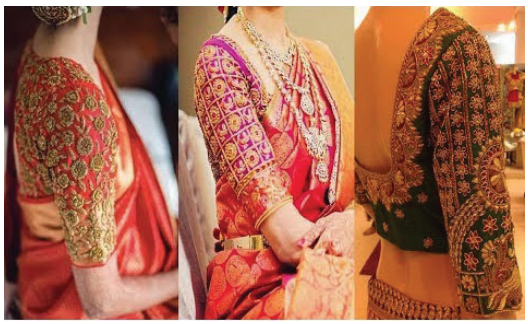
Objective: At the end of this lesson you shall be able to
- **understand centre design**
- **explain link design.**

Center design should be placed in the centre of the bed spread. It is also found on the back of men's kurta and frocks.

Blouses

The center design is located on the back and arms of the blouse.

Fig 1



SON121221

Table cloth

It is designed on the middle portion of the table cloth.

Fig 2



SON121222

Hand Kerchief

The design is located in the center portion of the handkerchief.

Link design

The link design is located on the edge of the fabric. This design will be everywhere in the saree.

Fig 3



SON121223

Blouse

The blouse has a continuous design on the neck and the sleeves and the arm hole of the blouse.

Fig 4



SON121224

Table cloth

This link design is found in all the four corners of a square shaped table cloth. In a round shaped table cloth, it is found on the edges.

Hand Kerchief:

Link design is found in all the four edges of the hand kerchief.

Fig 5



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Sleeve and Yoke Part

Objective: At the end of this lesson you shall be able to
- **explain about the designs on the sleeve and the yoke part.**

Placement of the design

Sleeve - Yoke:

The sleeve portion of a dress depends on the season and fashion. There are different types of sleeves available. The lower portion of the sleeve is suitable for the floral designs.

Set Sleeve: Center design is made on the sleeve of the shirt and the border of the sleeve is decorated with floral design. Floral design is also done on the part sleeves.

Yake - Yoke

Shirt neck and shoulder is generally of two types.

- Classic Shirt Yoke - It is the generally accepted shirt neck yoke.
- Western Shirt Yoke - It is the western style yoke.

Generally accepted shirt - neck and shoulder: Lined neck and shoulder seams. Rear neck stitches (Back) are there to join the two shoulder seams. It is decorated with flowers.

Western Shirt Yoke: It is decorated with flower designs at the rear part of neck and shoulder.

Cuff & Neck

Objectives: At the end of this lesson you shall be able to
- **learn about the structure of the cuff**
- **learn about the design of the neck area.**

Placement of design - Cuff & Neck:

Cuff - Necks: The shirt sleeves' cuff is stitched around the wrist area. Lengthy sleeve with cuff around wrist with open mouth.

Men's formal dress is designed with the cuff on the arm. The design will be minimal here. The edge portion will be filled with designs. We could see beautiful cuff designs on the children's wear.

Neck: Great emphasis is placed on the pattern on the necklines. It is placed in such a way that it suits the look of the store and the wearer. The necklines should be designed with special care because it should attract the attention of the viewer. All the neck structures are based on three important variations: Circular, square and V- shaped.

When choose the neckline, it is important to bear in mind about the wearers.

- Round face - Elongated neck strap, V-neck
- Lean, elongated neck- Closed neck
- Wide face and short neck, wide neck structure
- Long constricted face - closed neck

Placement of colour schemes and embroidery design

Objective: At the end of this lesson you shall be able to
- **state the types of placements.**

Placement of colour scheme, embroidery designs and types of placement

Horizontal placement: The horizontal designs of the garments are drawn and floral work is done. If the fabric is light in colour, the flower should be in dark colour. (Fig 1)

Vertical Placement: Vertical Placement in garments is designed vertically in the fabric with floral decoration. If the fabric is dark, light- coloured threads should be used to make the flower. (Fig 2)

Half drop placement: For this motif design, small beadwork or aari work is done. It must be placed between the two designs.(Fig 3)

Fig 1



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Fig 2



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Fig 3



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Diagonal Placement: A design is drawn diagonally from one corner to the other at diameter. It looks like an All over design. Motif design is done using dark colour thread on the light-coloured fabric, motif work with glass would be suitable. For example, dark blue floral work is done on the light blue fabric.(Fig 4)

Fig 4



SON121234

Embroidery placement on household items

Tablecloths, placemats and napkins: For tablecloths, embroidery is typically done on corners about 5 inches from the corners after the hem is finished would make it visible on most types of table cloths. For placemats, the design can be centred or placed on the corners, while the designs on napkins are always placed diagonally at a 45-degree angle on one corner around 3 inches from the corner and placed diagonally.(Fig 5)

Fig 5



Bedspread

Bedspreads are embroidered in the centre. On top sheets, however, the bottom edge of the embroidery designs is placed upside down, 2 inches from the top wide hem, on the back of the sheet. When you make the bed, the top hem is folded down on top of the blanket, so the embroidery design is facing you. Fitted sheets are not usually embroidered.(Fig 6)

Fig 6



Pillowcases and cushions

Embroidery designs are typically centred on pillowcases and cushions. The embroidery design is placed on the wide hem of the open edge that faces the opening. On pillowcases with a wide hem, they are placed in the centre of the space between the edges of the opening's wide hem.(Fig 7)

Blankets and bath towels

Place the embroidery design 10 inches from the blanket's top corner. If you have a towel with a border print, position the design so that the bottom edge is 1.5 inches above the border. If the towel lacks a border, place the design 2 inches from the hem of a hand towel and 4 inches from the hem of a large bath towel. Position the design on the opposite side of the label.(Fig 8)

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Fig 7



Fig 8



Wall hangings

There are beautiful wall hangings featuring embroidery patterns of elephants, tigers and flowers.These are hand woven by skilled artisans.Zari and semi-precious stones are used in wall hangings to enhance the beauty of the home.These wall hangings are available in various sizes and multiple colors to meet the needs of the customer. (Fig 9)

Fig 9



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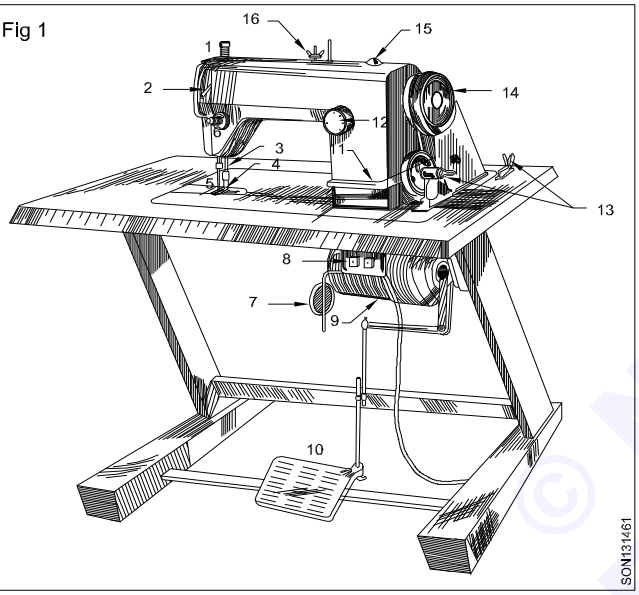
SOT(Embroidery) - Zig - Zag Embroidery Machine Frame Fitting and its Precautions

Introduction to the zig-zag embroidery machines

Objectives: At the end of this exercise you shall be able to
- **state the introduction of zig-zag embroidery machine**
- **describe the setting of zig-zag embroidery machine.**

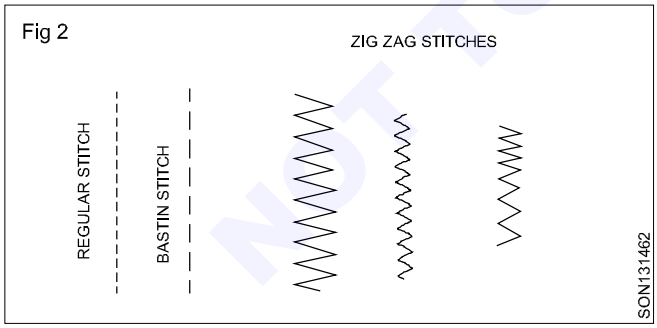
Embroidery machines known as power machines and zig-zag embroidery machines. Creating embroidery on fabric using this machine is an art and its needs lots of practice because the embroidery hoop is controlled freely by hand rather than being fixed to the machine. (Fig 1)

Fig 1



Zig-Zag embroidery machine is a full shuttle easy to operate machine. This machine has only one or two needles. It can sew the stitch in zig-zag shape called 'satin stitch' and straight called 'Running stitch'. (Fig 2)

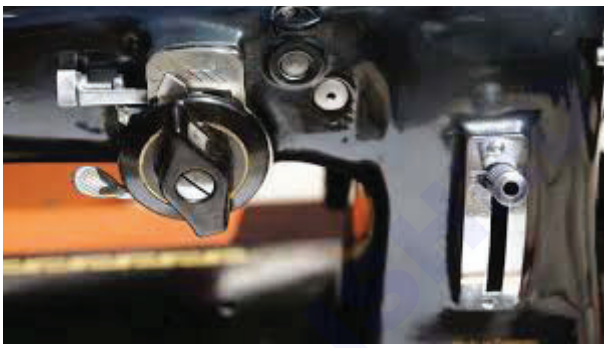
Fig 2



Other stitches such as picot, darning, shade work, cording scallops and appliqué work etc. can be done using this machine. Any type of fabric such as silk, cotton, and rayon can be used for embroidery.

Power machine has stitch controller located in front right side of the machine and it contains 0-8 numbers on it, which shows the width of stitches in mm (Fig 3).

Fig 3



Using it width of stitches can be fixed from 0-8 mm according to design and it can also be controlled using knee pad or knee lifter, to make pointed leafs shape etc. Knee pad is located in the bottom side of the machine. (Fig 4)

Fig 4



This machine fits on metal or wooden stand. It is motorised machine and generally 250 watt motor is used in this machine. The zig -zag machine can sew generally 800-1200 stitches per minute. The speed of machine can be controlled by accelerator located at bottom part of stand.

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Types of Zig-Zag embroidery machines

Objectives: At the end of this lesson you shall be able to
- **state the introduction to the machine**
- **explain the types of embroidery machines.**

Embroidery is a rich and versatile art. This technique is used to create pattern on fabric using threads, needle and other material. Embroidery can be done by both hand and machine.

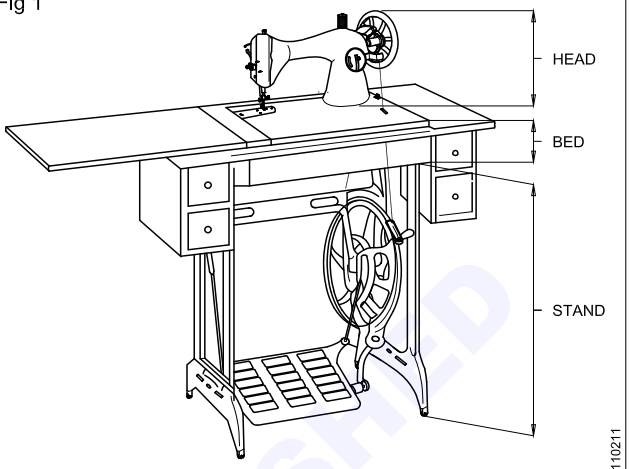
There are different types of embroidery machines are in the market and each one have its own special feature.

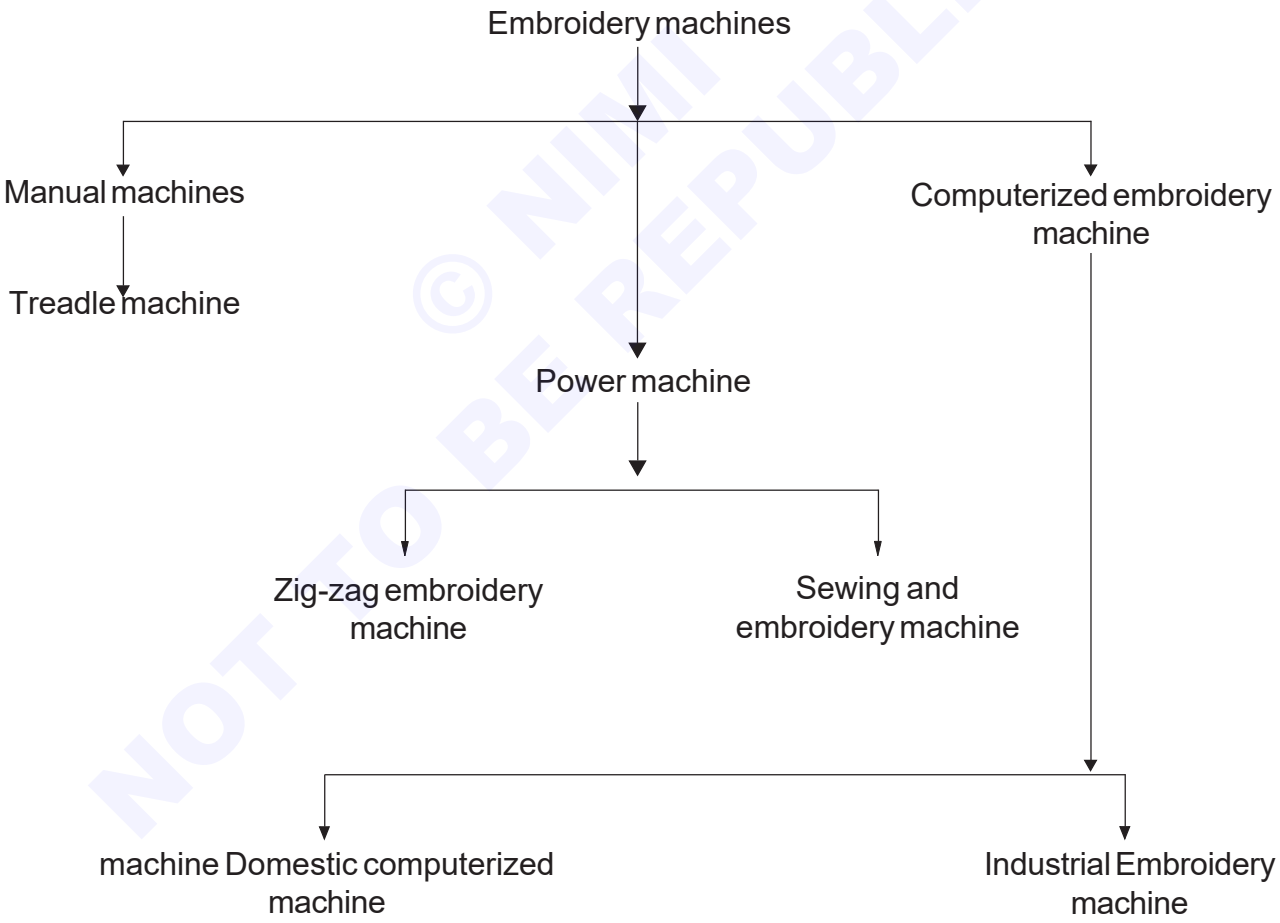
Generally three types of machines are categorized according to their speed, accuracy and capability etc. Types of different machines are as follow:

Manual Machine

It is a simple domestic sewing machine with its treadle (Fig 1).

Fig 1

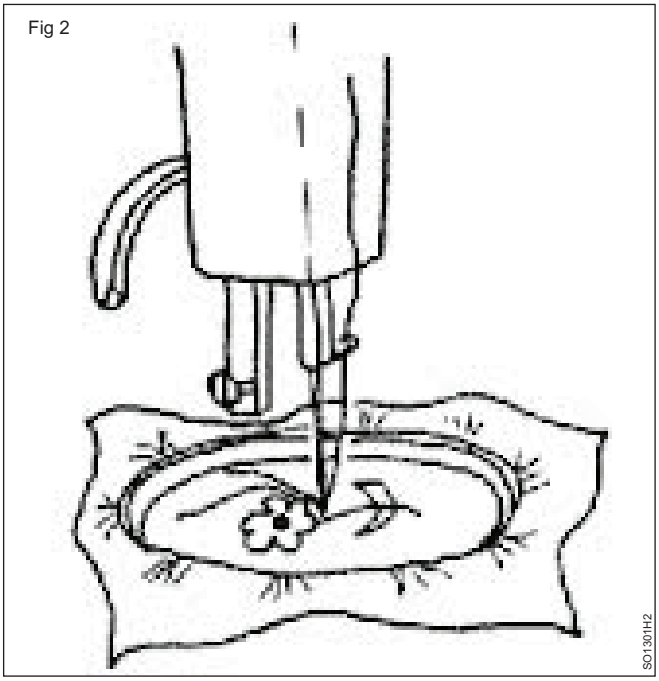




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This machine is very easy to operate and its used for embroidery. Embroidery frame is controlled freely by hands. (Fig 2)

Fig 2



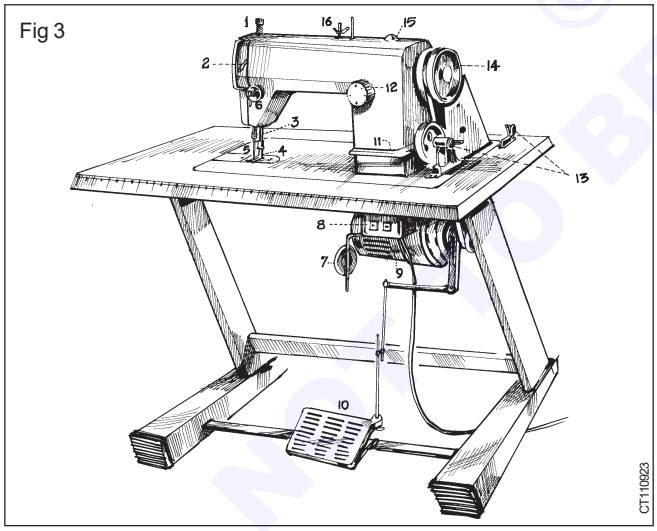
Power machines

Power machine are motorised embroidery machines. Two types of power machines are :

Embroidery machines

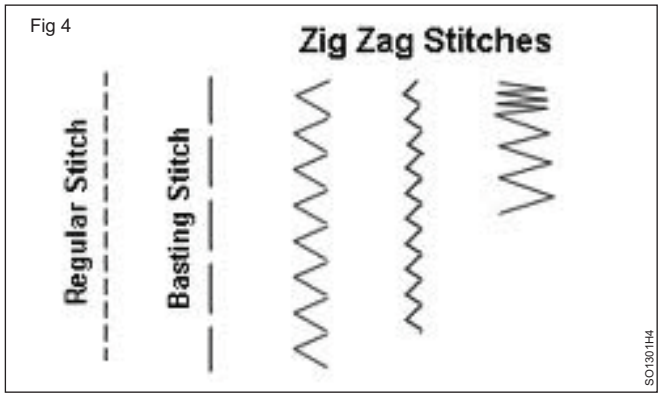
This machine also known as zig-zag embroidery machine (Fig 3).

Fig 3



Running stitch and zig-zag shape stitches can be done using this machine. It creates running stitch or straight stitch on 'O' no. and ziz-zag or satin stitch on '3-5' no. (Fig 4)

Fig 4

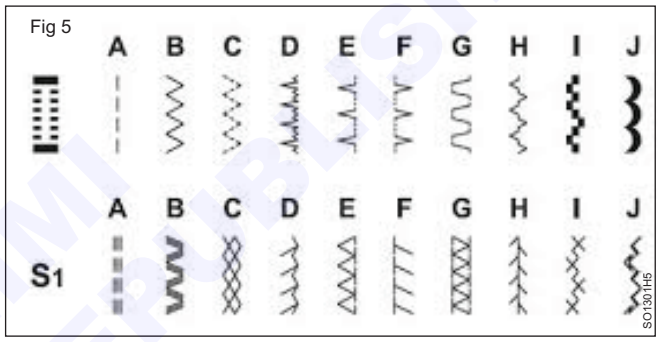


Embroidery hoop is controlled freely by hand.

Sewing and embroidery machine

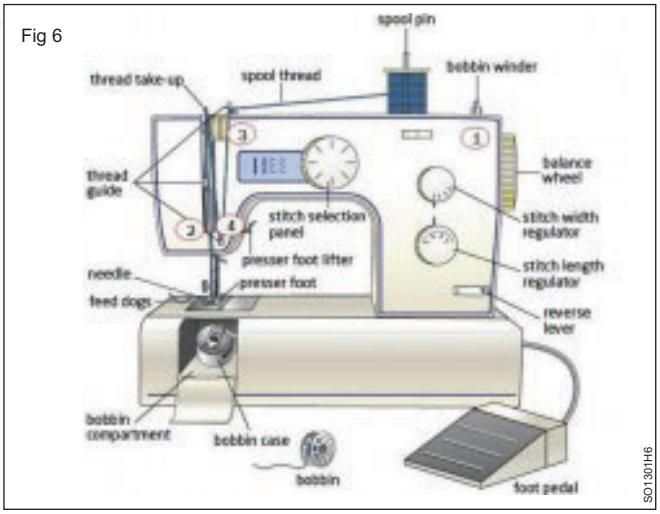
This machine is also known as 'Disk system machine'. These machine have the capabilities of both sewing and embroidery. Some particular embroidery pattern can be done with this machine (Fig 5).

Fig 5



Some machine have separate embroidery units that attach to the machine while other have built n embroidery function that are out of the way when not in use (Fig 6)

Fig 6



Computerised embroidery machine

There are many types of computerised embroidery machine are available in the market according to their size, type and capabilities. These macine are controlled by computer and its work automatically. These machine are operated by special software called 'Embroidery digitizing software'. Two types of computerised embroidery machines are as follow :

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Domestic computerised embroidery machine

These machines have the capabilities of computerized machine embroidery and also can be used for stitching garments. These machines have coloured screen and have one or two needles. (Fig 7)



Multi head computerized machine

These machine are generally used in industries because of production work. These machines have multi needles in each one head. The number of needles can vary according to the machine. (Fig 8, 9)





Zig Zag Machine parts and their functions

Objectives: At the end of this lesson you shall be able to
- **define designing**
- **explain method elements & principles of designing**
- **describe designs for dresses**
- **choose designs for dresses.**

Common parts of the embroidery machine and their functions are as follow:

1 Belt (motor or machine)

The belt transmit circular motion from the pulley to the hand wheel allowing the machine to operate.

2 Bobbin winder

The part that weld to fill the bobbin.

3 Face plate

Located on the left side and cover the needle bar and pressure bar etc.

4 Hand wheel

Also known as balance or fly wheel, controls the motion of the machine manually or electrically

5 Head

The part of the machine above the table that contains the stitching mechanism.

6 Hook

Known as rotary hook, a rotating device that hooks the needle thread to carry it around the bobbin and form the lock on the lock stitch.

7 Motor

The electrical unit that drives the machine.

8 Needle

The part that penetrate the fabric, it carries the upper thread through the fabric to create a stitch.

9 Needle bar

A vertical bar that holds the needle, and moves the needle up and down.

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10 Needle bar clamp

The screw secure the needle in place.

11 Oil gauge

The part that indicates the amount of oil in self-oiling machine.

12 Machine pan

The metal pan located under the head that catches oil and lint. On self-oiling machines, it holds the oil.

13 Pulley

The wheel that attached to the motor and transmits motion from the motor to the hand wheel by a belt.

14 Rotary hook assembly

That part holds the bobbin case.

15 Stand

A metal or wooden structure upon which the table is fixed.

16 Switch

A button that turns the machine on or off.

17 Stitch controller

A device that regulates stitch width.

18 Slide plate

A removable cover at left side of the machine bed that allows access to the lower mechanism.

19 Table

The cabinet up which the bed fixed.

20 Take up lever

The part that loosen the top thread during the stitch formation then removes any stack to set the stitch.

21 Thread guide

The part that guide the thread from spool pin to the needle smoothly and protect it from tangles.

22 Thread stands

A metal device that holds the thread cones.

23 Tension discs

Two concave discs that control the delivery of the upper thread from the spool to the needle.

24 Bed

The working surface of machine under which is located the mechanism.

25 Knee pad

Also known as knee lifter or knee press. A lever located under the sewing table to control the width of each stitch with the right knee.

26 Pedal

Known as accelarator controls the machine speed.

Defects and remedies of embroidery machine

Objectives: At the end of this exercise you shall be able to
- **explain machine troubles occuring while embroidering with and name its ractification.**

Fault	Causes	Remedies
Skipped stitches	Needle bent. Needle set to wrong side. Needle set with long groove turned inserted too high or too low in the needle bar. Needle too small. Needle threaded from the wrong side. Excess oil on shuttle.	Check and fix the needle in a correct position. Check whether it is threaded properly. Stitch with a scrap of material to remove excess oil.
Upper thread breaking	Poor thread. Machine incorrectly threaded. Needle set on wrong side. Needle too fine. for thread. Needle threaded from the wrong side. Upper tension too tight. Sharp edge on needle plate hole or shuttle thread. Take-up spring broken.	Select an appropriate (correct) thread and needle. Thread the needle properly. Check the upper tension and the hole in the needle plate (which should be smooth) and also for take up spring.
Lower thread breaking	Poor thread. Lower tension too tight. Bobbin case threaded wrongly. Sharp edge on the needle plate. Bobbin would too full or uneven. Dirt in the bobbin case.	Clean the bobbin case and select the correct thread and wind it uniformly. Check the lower tension and check for a smooth hole in the needle plate.
Fabric puckering	One or both tensions too tight. Stitches too long for material being sewn. Blunt needle.	Select the correct needle. Check for both tensions. Fix the stitch length accurate to the fabric.

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Needle breaking	Incorrect size of needle for thread and fabric. Needle bent. Pulling of material while embroidery	Set the presser foot properly. Select appropriate needle and thread to match the fabric. Fabric should not be pulled out while stitching.
Machine runs heavily	Lack of oil. Thread wound around the wheel or treadle bearings. Belt too tight. Winder pressed down. Thread jammed in shuttle race. Gummed oil or dirt on bearings.	Oil the machine periodically, clean the wheel and treadle bearing. Check the belt tension release the bobbin winder. Clean the shuttle race. Use only sewing machine oil.
Lower thread is visible on fabric	Upper tension too light. Lower tension too loose Bobbin threaded wrongly	Loosen the top tension. Use a different type of embroidery thread. Tighten the bobbin case. Re thread the bobbin

Threading the machine

Objectives: At the end of this exercise you shall be able to
- **describe the process of threading the machine.**

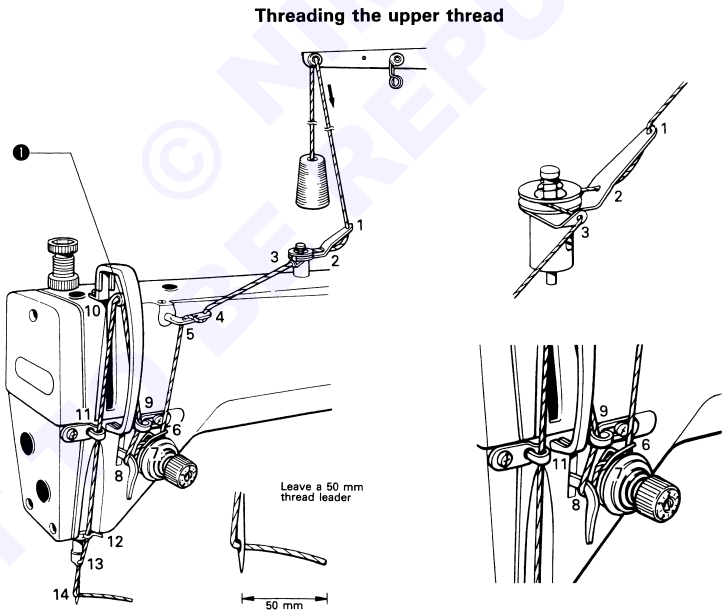
Zig Zag embroidery machines have so many operation after knowing the parts of machine and their functions, every trainee should have the knowledge of threading the machine before operating it. It helps the smooth and tangle free operation and prevents stitching faults. Steps of threading the machine and draw up the bobbin thread are (Fig 1)

1 Turn off the machine.

2 Place the thread on the thread stand. Then pass the thread over the guide at the top of the thread stand and through the hole in the spool pin.

3 Guide the thread into the hole of the needle thread retianer. Then, guide it through the remaining hole.

Fig 1



4 Guide the thread between the tension discs.

5 Guide the thread from right to left into the eye of the take-up-lever.

6 Guide the threads through the remaining guides.

7 Trim the thread end as needed thread it into the eye of the needle from left to right.

8 Pull the thread end about 3” and hold the thread.

9 Turn the hand wheel so that the needle moves up and down again to catch the bobbin thread.

10 If the thread doesn’t come up, check the machine threading. Remove the bobbin case, rethread and insert again.

11 Pull the needle thread to bring the bobbin thread up through the needle hole.

12 Pull both threads up to 5”.

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Join upper and lower thread

Objective: At the end of this lesson you shall be able to
- **join upper and lower thread.**

Drag the nail plate to the left with the left pointer and hold the bobbin case with the left hand. Place the knob above and press it till you hear the click sound from inside the shuttle. Close the nail plate. Bring out the bobbin. Hold the thread on the top of the machine with the left hand. Rotate the fly wheel completely with the right hand so that the needle goes fully into the bobbin case.

When the needle reaches its highest point, it forms a loop with the thread below and the thread above. (Fig 1) Then release the thread. To bring the tip of the bobbin thread out, pull the loop of the bobbin.

Place the two knots of the thread with length of 9 to 10 cm together below the pressure foot.

Fig 1

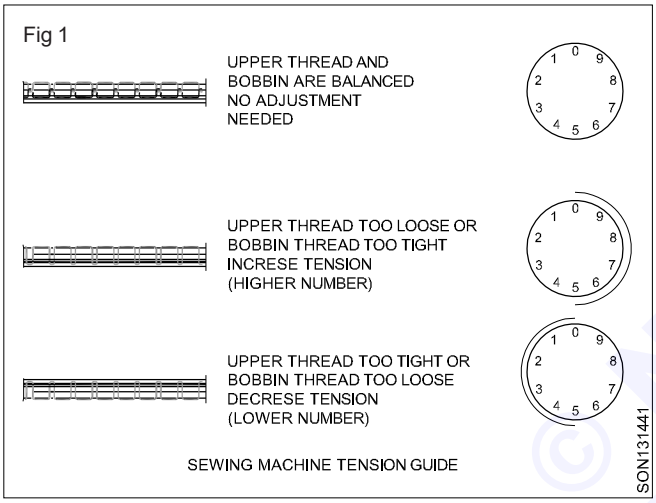


Fig 2

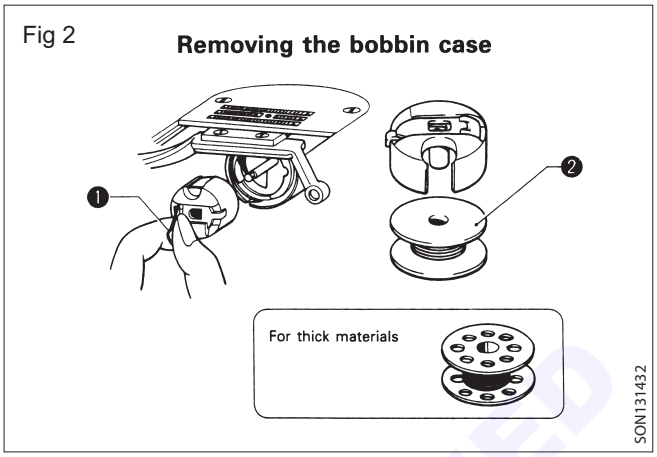
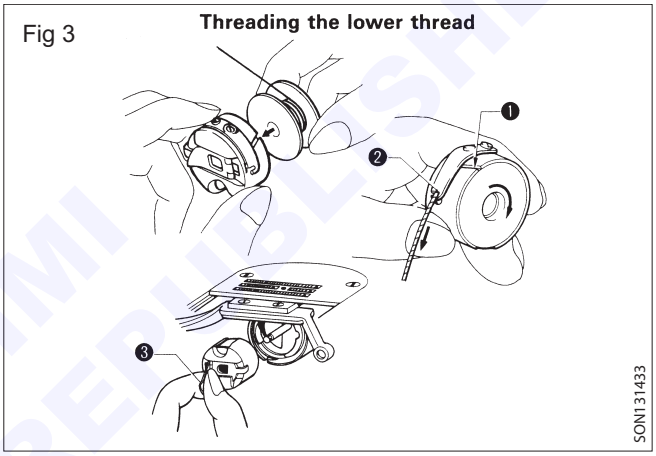


Fig 3



Bobbin winding

Objectives: At the end of this lesson you shall be able to
- **explain winding the bobbin**
- **describe the process of inserting bobbin in to the bobbin case.**

Bobbin winding

Fill the thread in the bobbin by hand. Bobbin winder-bobbin should be on left side. Thread is to be an top side if not again wind the thread. (Fig 1)

Set the bobbin wind lifter by using right hand and it should be towards down ward (Fig 2)

Fig 1

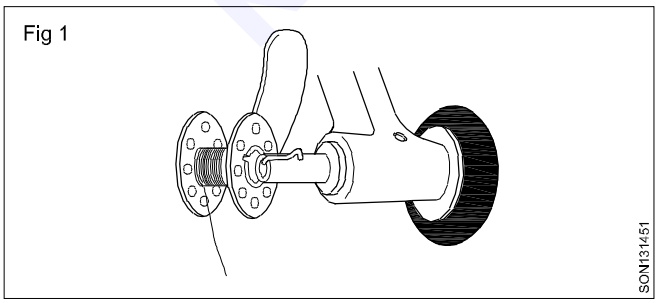
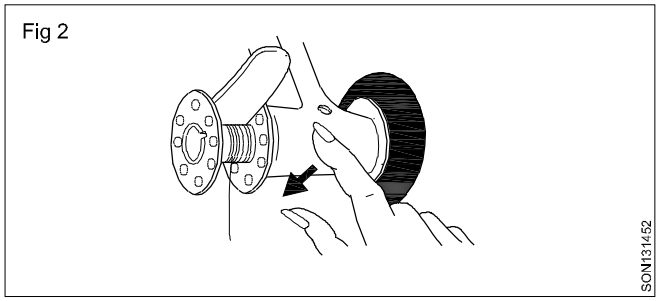


Fig 2



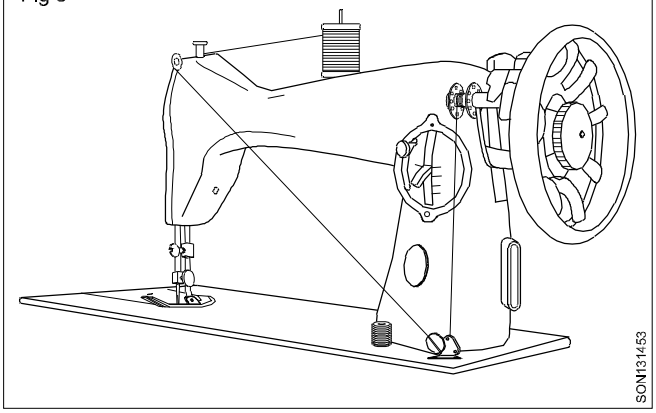
Set the bobbin thread guider at the bottom of the machine keep the spool in the spool pin (Fig 3)

The wheel which is operating the machine speed control stop thread keep it in loose (If not the needle will break) (Fig 4)

The fly wheel which operates the machine push it towards you, also to fill the thread in the bobbing, by foot operate the part of the machine which activate the machine. To have ever winding care should before in advance. (Fig 5)

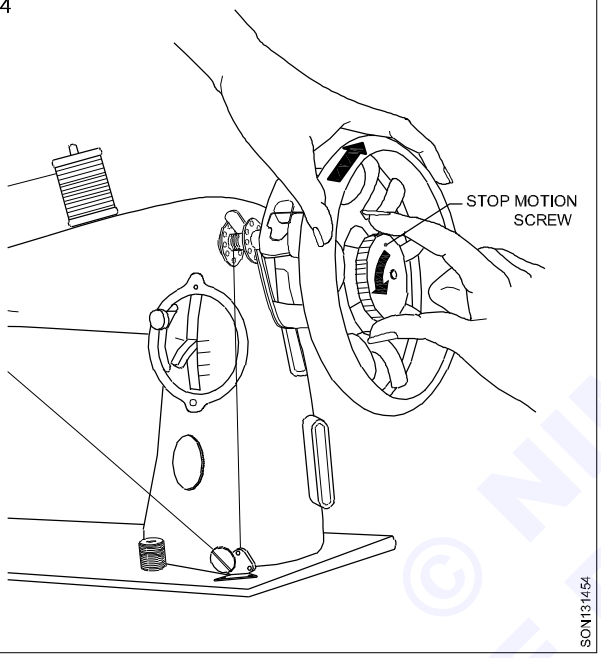
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Fig 3



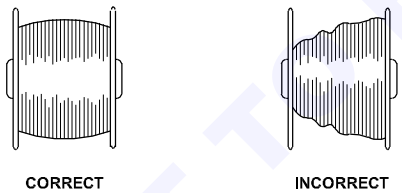
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Fig 4



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Fig 5



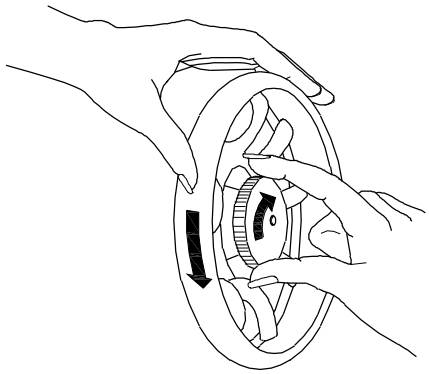
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To stop the machine full upward, the rotating winder lifter, from the bobbing winder remove out the bobbin. Also in the spool cut the thread confirm the strength of the thread which is to the machine operating wheel (Fig 6)

Keep the bobbing in the bobbin case (Fig 7)

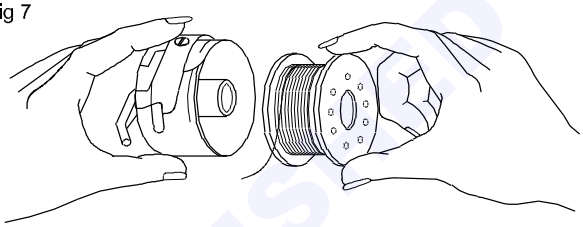
Bring down the torsion, spring through tension spring. List the thread upward so that it gives tightness to bobbin and through the tip end of the tension spring pull the thread to the top (Fig 8, 9)

Fig 6



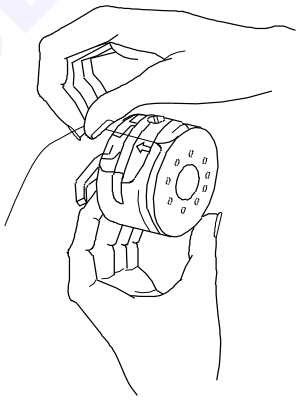
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Fig 7



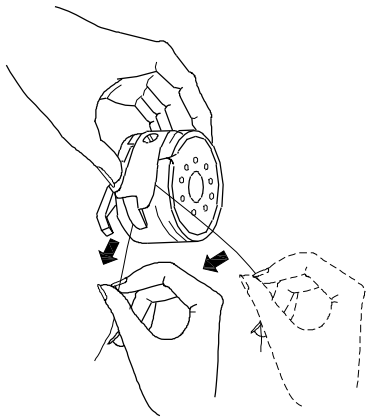
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Fig 8



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Fig 9



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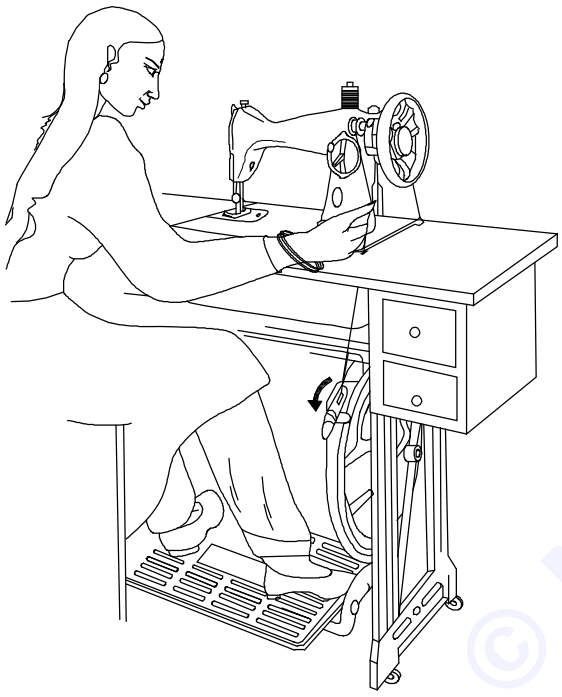
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Setting the machine for embroidery

Objectives: At the end of this exercise you shall be able to
- **describe the process of setting the machine for embroidery**
- **state the zig-zag embroidery machine.**

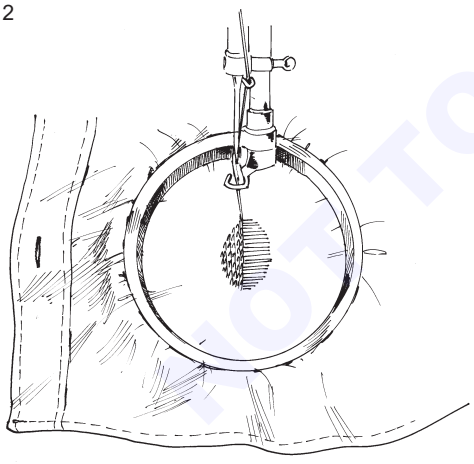
The processing of creating embroidery using an ordinary sewing machine is called free motion embroidery. Free motion embroidery is an art and needs practise because the ordinary embroidery hoop is controlled freely by hand rather the being fixed to the machine. (Fig 1 to Fig 4)

Fig 1



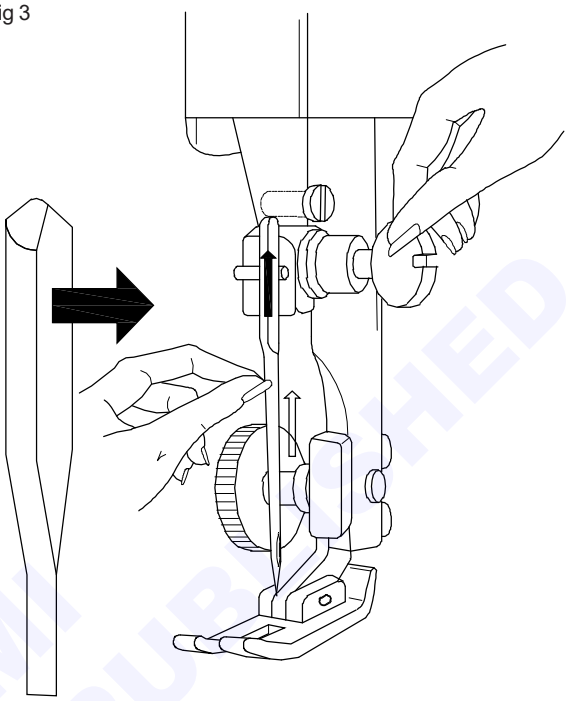
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Fig 2



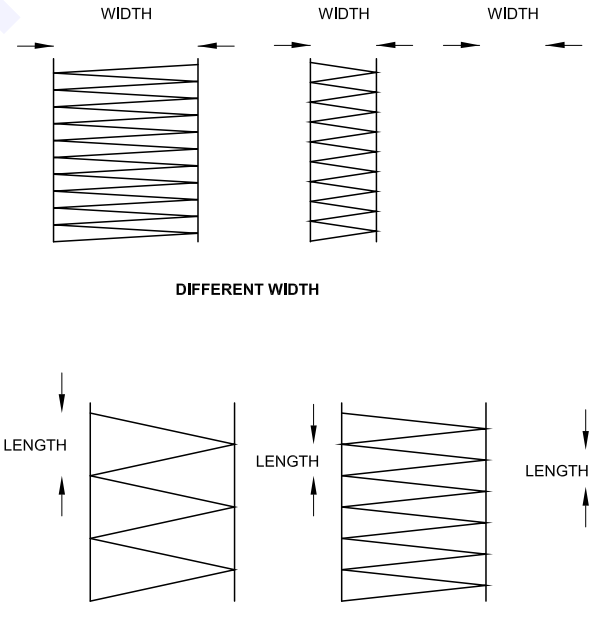
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Fig 3



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Fig 4



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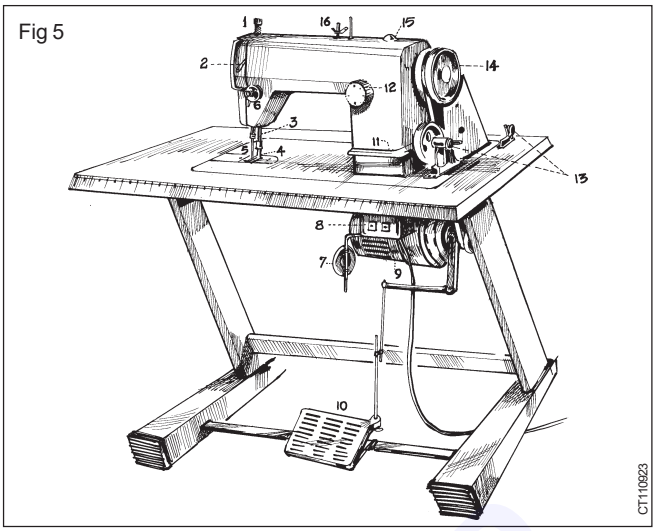
To prepare the machine for embroidery, drop the feed dog or cover it using embroidery needle plate. After dropping the feed dog remove the pressure foot. Now correct thread tension is very important for successful machine embroidery. So moderate the upper and lower tension according to embroidery stitches. The top tension usually needs to be looser than bottom. After adjusting the thread tension change the needle. Mostly A 9 no and 11 no needle can be used accordingly to fabric. Now set the sewing machine for straight stitch by setting the stitch length/width at zero. Hoop the fabric using appropriate backing and place the embroidery hoop in stitching area for sewing embroidery stitches.

Check the setting before beginning the project.

Embroidery machines

This machine also known as zig-zag embroider machine. Running stitch and zig-zag shape stitches can be done using this machine. It creates running stitch or straight stitch on 'O' no. and ziz-zag or satin stitch on '3-5' no. Embroidery hoop is controlled freely by hand. (Fig 5)

Fig 5



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SOT(Embroidery) - Zig-Zag Embroidery Machine Frame Fitting and Precautions

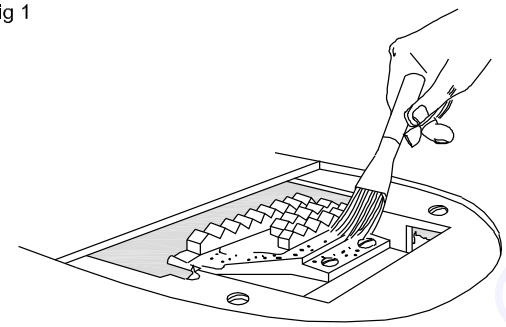
Overview of Operations and Handling of Zig Zag Machine

Objectives: At the end of this exercise you shall be able to
- **explain all the required maintenance work for the proper functioning of the machine.**

Care and maintenance of the machine: Regular cleaning, oiling and care of the machine ensures satisfactory sewing and a long life for the machine. When not in use, keep your machine covered to prevent dust from setting on it.

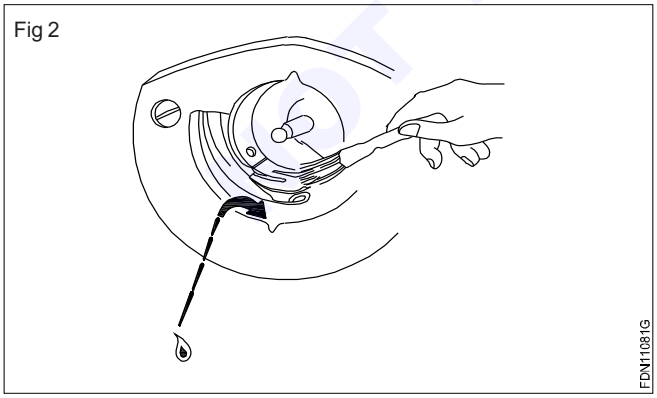
Cleaning: You should always remove lint deposits, dust and thread bits before oiling any part of the machine. Use a small dry brush or a toothbrush and a soft cloth to remove dust and lint. Use a pointed instrument like a needle to pick out bits of thread and lint that cannot be brushed out. To clean the feed dog remove the needle plate of the machine and brush off lint deposits and dirt sticking to the feed mechanism. (Fig 1)

Fig 1



To clean the shuttle race, remove the two screws holding the shuttle race assembly to the machine, take out the shuttle race, wipe its groove free of dirt, fluff and broken bits of thread. Sometimes loose thread wind around the rivets of the treadle and make the machine hard to run. You should remove thread bits caught in the wheel and all lint and dust sticking to the treadle part. (Fig 2)

Fig 2



Oiling: It is necessary to oil and lubricate the machine periodically. If the machine is used every day, oil it once a week. If you use it infrequently then once a month should be sufficient. To oil thoroughly, remove the upper thread, needle plate, slide plate, faceplate, bobbin case, needle and presser foot. Put special sewing machine oil in all oil holes and joints where one part rules against another. While oiling, turn the flywheel back and forth to help the oil flow to the moving parts. (Figs 3 & 4)

Fig 3

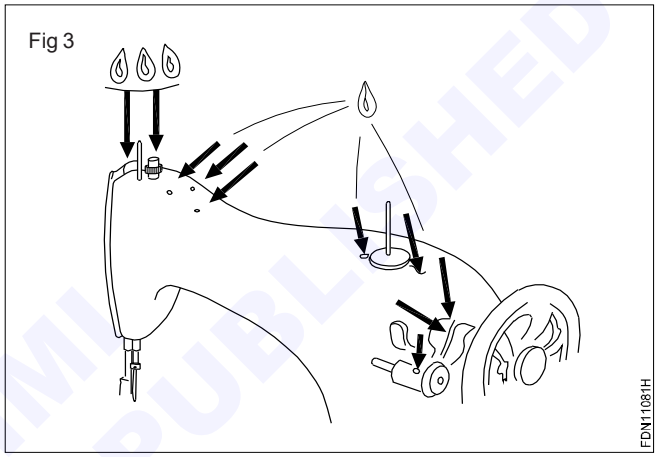
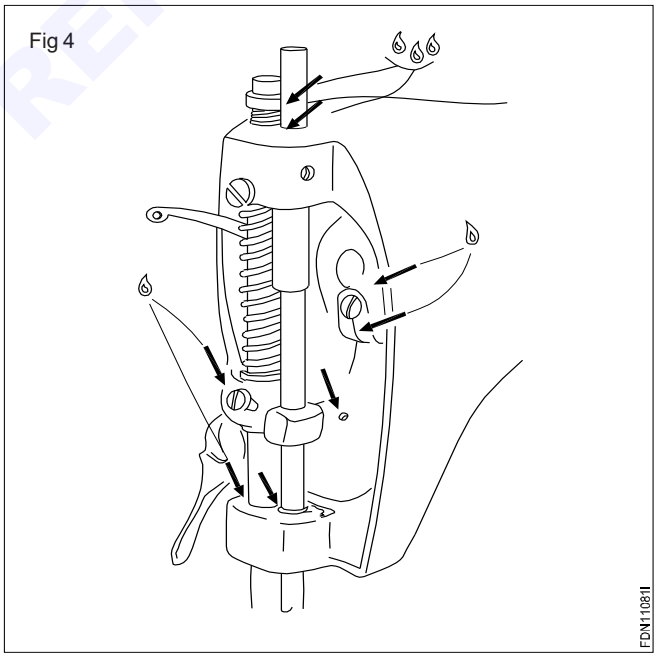


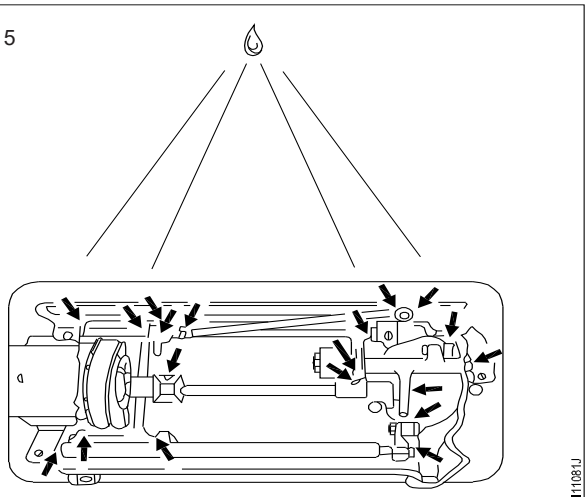
Fig 4



After oiling the points on the head of the machine, tilt the machine head back to oil the points on the bed of the machine. It is essential to oil the shuttle race. On a treadle machine, the belt will have to be released before tilting the machine head back. (Fig 5)

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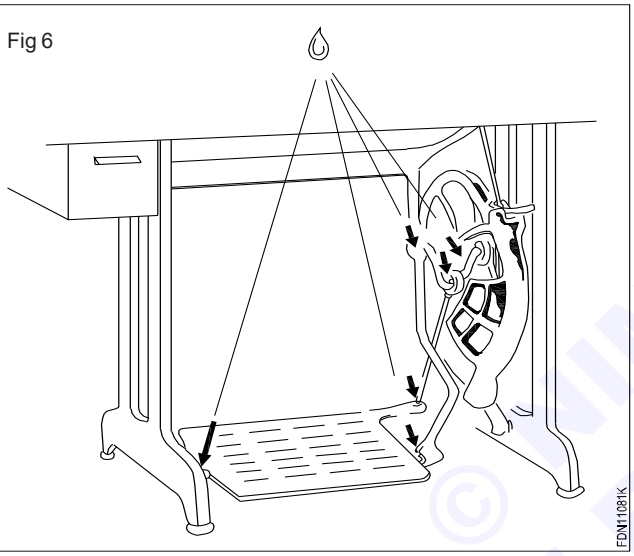
Fig 5



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Do not forget to oil the machine stand (Fig 6)

Fig 6



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When the machine has been thoroughly oiled, wipe away excess oil and run it slowly for several minutes on a waste piece of material. Before you close the machine, place a scrap of material under the pressure foot and lower the needle. The fabric will absorb the excess oil that might drain down through the machine and will prevent formation of oil spots on your work, when the machine is used.

If there is excess oil in the machine, put a drop of kerosene or petrol in each oil hole and joints and run it rapidly for several minutes. Then wipe off the oil that oozes out with a soft cloth and re-oil the machine. It will need a second oiling within a few hours after this treatment.

Stitch formation: The needle thread loop, having been formed on the underside of the material by the needle, is interlocked with a second thread (under thread) by means of a hook.(Fig 7)

The needle is inserted into the material. (Fig 7a)

As the needle moves upwards from its lowest position, the needle thread forms a loop which is caught by the point of the hook. (Fig 7b)

The hook enlarges the needle thread loop. (Fig 7c)

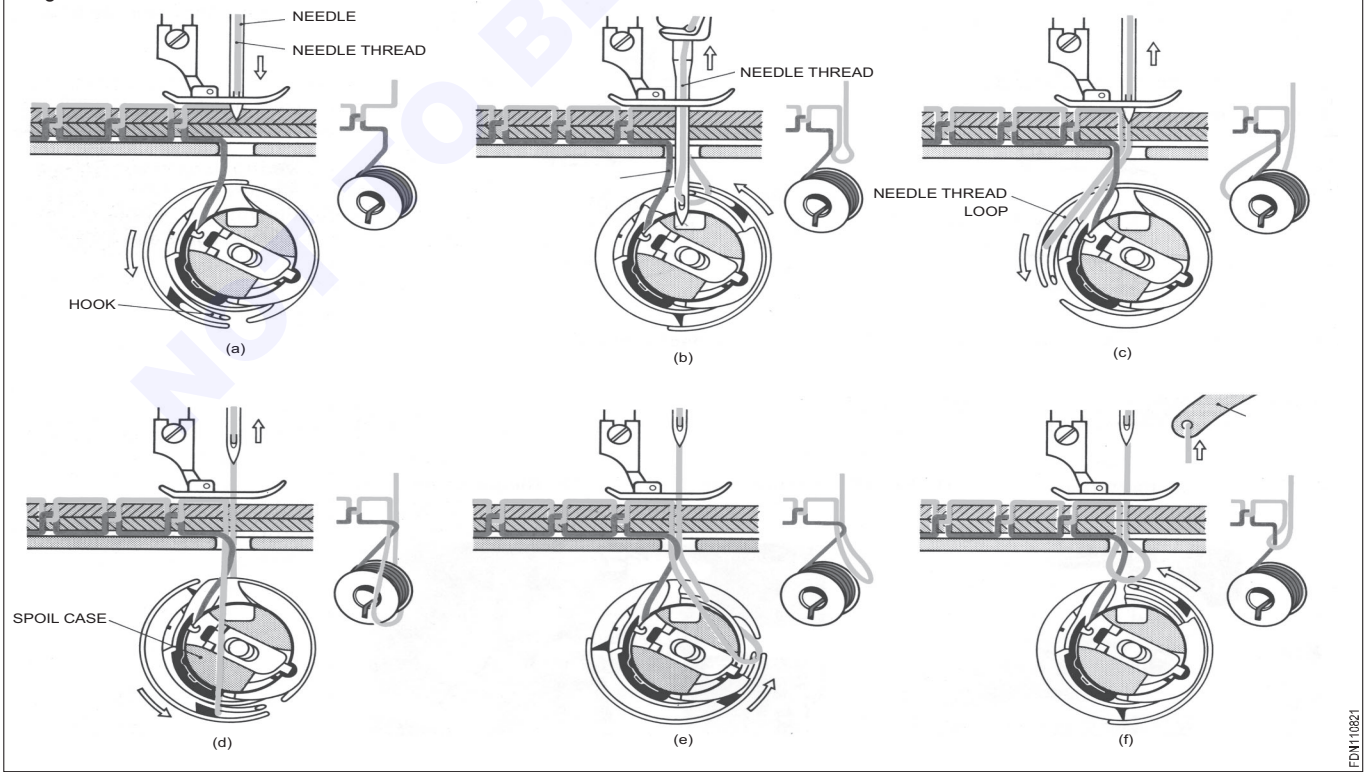
The needle thread loop is guided around the bottom thread spool. (Fig 7d)

Interlacing begins. (Fig 7e)

The take-up lever tightens the stitch into the material. The material is fed forward. (Fig 8 to 10)

Stitch balance: Before regulating the tension, make sure that the threading of the machine - top and under threading - is correct. When there is perfect balance of tension between the upper and lower threads, the stitches lock or meet together in the middle of the thickness of the cloth.

Fig 7



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Fig 8

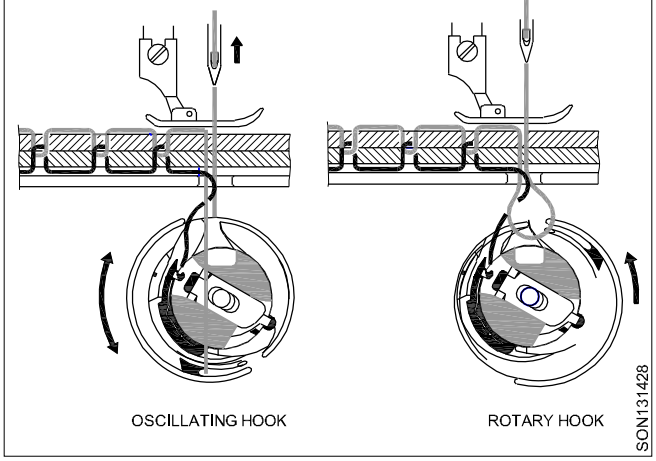


Fig 9

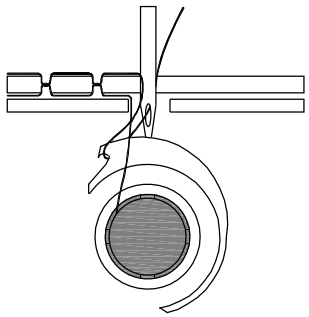
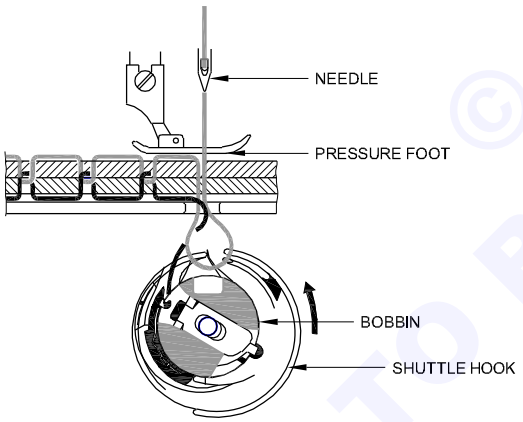


Fig 10



The stitches will look alike on either side of the work, both as to shape and tightness.

When the upper tension is too tight, the spool thread lies straight on top of the fabric and the under thread appears like loops on the upper side of the cloth.

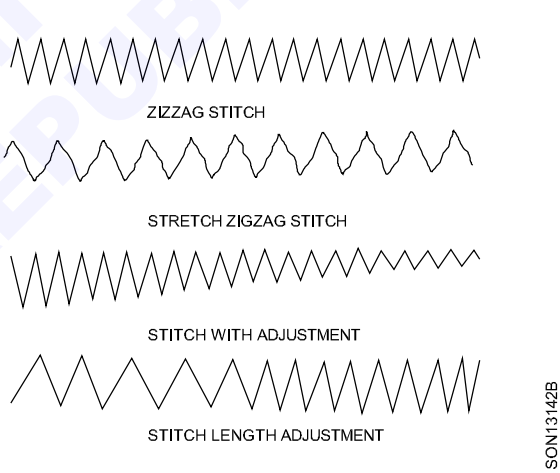
When the upper tension is too loose, the under thread lies straight on the underside of the fabric and the top thread appears like loops on the underside.

An easy method of recognising tension is to stitch diagonally across a square of the fabric folded on true bias and then to stretch the cloth firmly between your fingers until one or both threads break.

The broken thread always is the one with tighter tension. If the tensions are balanced, both threads break together and require more force to break. If it is found that the tension needs adjustment, it is better to try to adjust the upper tension. To increase or decrease upper tension, turn the screw on the tension regulator with the pressure foot down. In turning the screw remember that right is right and left is loose. Usually there will be numbers written on the tension dial. To increase tension, you should turn towards the higher numbers and to decrease, towards the lower numbers . Do not move more than two numbers or a slight turn at a time. Then recheck the tension by stitching on a sample of fabric.

Avoid changing the lower tension unless you are sure that the tension cannot be corrected completely by adjusting the top one alone. The lower tension is adjusted by turning the small screw on the bobbin case using a screwdriver. Usually the screw is turned to the right to tighten and onto the left to loosen. Make a very slight turn only each time. (Fig 11)

Fig 11



Adjusting the stitch length: The chart on this page gives the correct stitch length for various fabrics. In general, fine fabrics require a short stitch (16 to 20 stitches for 2.5 cm), medium weight fabrics, a medium stitch (12 for 2.5 cm) and heavy fabrics a long stitch (8 to 10 for 2.5 cm). For machine basting and machine gathering a still longer stitch (6 to 8 for 2.5 cm) is required.

Trouble shooting while stitching with machine: Common faults and their causes are given below.You can take care of most of this yourself.It is is a major problem then take the help of a qualified mechanic.

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Sl. No.	Weight of the Fabric	Type of Cloth	Thread size	Needle size	Stitches per 2.5 cm
1	Light	Muslin, Cambric and other thin fabrics	50	9 - 11	14 - 20
2	Medium poplins, etc.,	Shirting, Sheeting,	40 - 50	14	12
3	Medium heavy brocade, corduroy	Light woollens,	40	16	10 - 12
4	Heavy upholstery fabrics	Woollen goods,		20	18 8 - 10

Embroidery machine attachments

Objectives: At the end of this exercise you shall be able to
- **state the different types of embroidery attachments and their uses.**

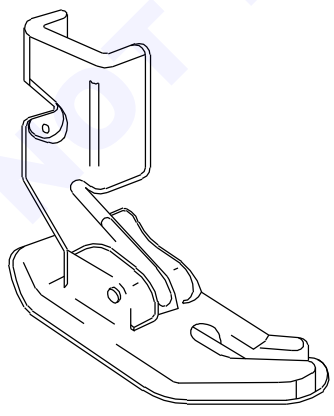
Embroidery machine attachments are very important to design and use to increase the embroidery machines versatility and efficiency. Most of them take the form variations on the presser foot, but the group also includes embroidery stitch pattern, and special purpose attachments.

Some of the attachments are shown below in figures. The names given to them may vary. Some manufactures may combine several features into one foot. It should not be assumed that all the attachments shown are available for all the machines, they are interchangeable from one machine to another. While using any type of presser foot, it is important to know that the type of stitch which can be sewed with it. This depends up on the needle hole of the machine. If the foot is small and round it can be used only for straight embroidery stitches. If the hole is wide the foot can be used for straight and zig-zag embroidery stitches.

Straight stitch foot

This foot is best one to use when doing single needle straight stitching. If it is a narrow foot one toe is slimmer than the other toe. (Fig 1)

Fig 1

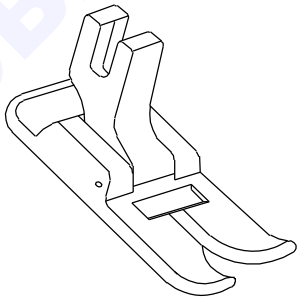


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Zig-zag foot

This foot often referred to as an all purpose foot. It is used primarily for plain zig-zag stitches, but it can also be used for straight stitches. (Fig 2)

Fig 2



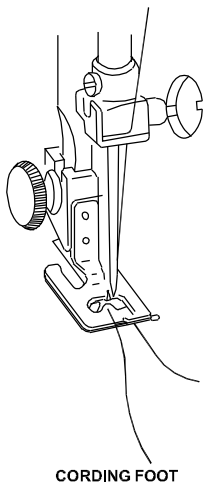
ZIG-ZAG FOOT

SON131472

Cording foot

This foot has a built-in device that provides for a steady supply of cord to be feed and attached to the fabric. Sometimes incorporated into button hole foot. (Fig 3)

Fig 3



CORDING FOOT

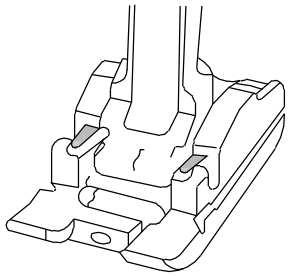
SON131473

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Embroidery foot

This embroidery foot is best for stitching decorative stitch pattern. Bottom of this foot is grooved to create a shallow "tunnel" that permits the dense stitching to pass easily under the foot. (Fig 4)

Fig 4



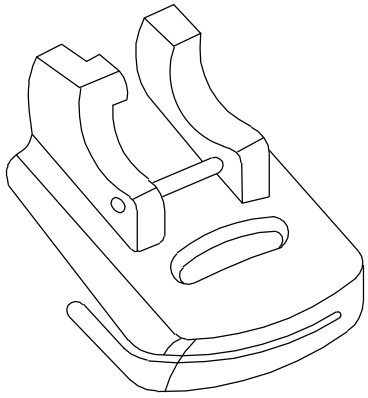
EMBROIDERY FOOT

SON131474

Gathering foot

This foot is used for gather up a length of fabric as it is being stitched. Some gathering foot will simultaneously gather one layer of fabric while stitching it to another flat piece of fabric. (Fig 5)

Fig 5



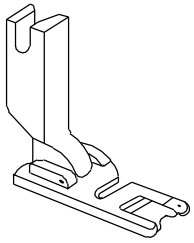
GATHERING FOOT

SON131475

Hemmer foot

This hemmer foot allows a raw edge of fabric to be neat finished. It does this by automatically turning under the edge, which is then fed under the needle and stitched into place. (Fig 6)

Fig 6



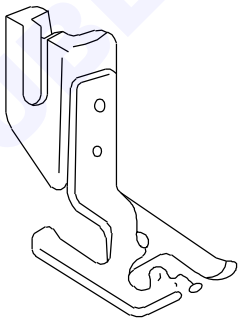
HEMMER FOOT

SON131476

Special purpose foot

The special purpose foot provides ample visibility and allows closely spaced zig-zag stitch to feed freely. It is ideal for accurate placement of satin stitching in monograms, motifs and applique. Eyelet in front of foot accomodates a filler cord for corded applique. (Fig 7)

Fig 7



SPECIAL PURPOSE FOOT

SON131477

Types of stitches in zig-zag machine

Objective: At the end of this lesson you shall be able to

- **explain the type of stitches based on the function of the zig zag machine.**

Types of stitches

There are many types of stitches. But we can classify them into five types based on their functions.

1 First draw a line and have running stitches.

2 Satin stitches are used to stitch wide lines. The so-called columns are stitched using zig zag stitches.

3 fill the fields (large volumes can be filled in a variety of ways)

4 Jump stitching (not stitching) means to move from one place to another

5 Use the lock axis at the end of all stitches. (Sew the thread only in specific places)

Running stitch

Running stitch or straight stitch is the basic stitch for hand stitches and embroidery. This stitch is made by inserting needle inside and outside the thread. Two stitches are used for a similar forward and backward pattern. This type of sewing will create a strong solid line.

Parameters

1 length

2 Repeat usually one to three stitches

Satin stitches (Fig 2)

This is called damask stitches. Satin stitches are used generally in hand and machine embroidery. They are used to stitch small parts. Satin stitches or damask stitches

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Fig 1



means a series or flat stitch. They are used to completely cover a part of the background fabric. Short rows of satin stitches can be applied on a standard sewing machine using a zigzag stitch or satin boot. Sew with satin or chain stitch outside to sew smooth edge patterns. Machine made satin is often used to sew under the fabric for application. There are many types. The sewing of a normal satin uses parallel straight stitches. This is a kind of zigzag stitching.

Parameters

1 length of the stitch

2 Angle (usually orthogonal but small columns require oblique stitches)

3 Density

4 Underlay

Fill the seams

It is used to fill large areas. Every advanced software is configured in many formats.

1 Stitch length usually 4 mm

2 Density

3 Down

4 Size of objectives

Fill up techniques and strategies

The first question is how to fill the parts of sections. There many stitches and direction of stitches. There are two reasons for this usage.

1 Push/pull curve can be compensated.

2 The design is very interesting.

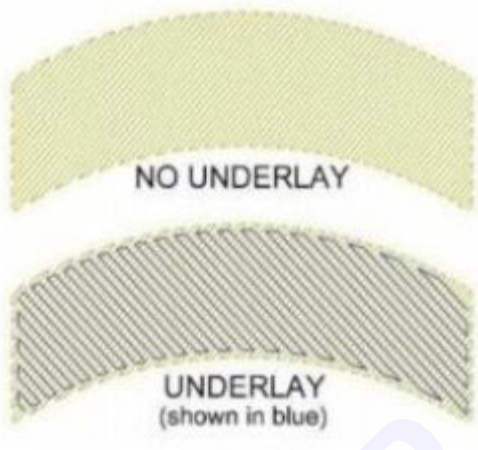
3 Good digital software must help with this.

Fig 2



Underlay

Fig 3

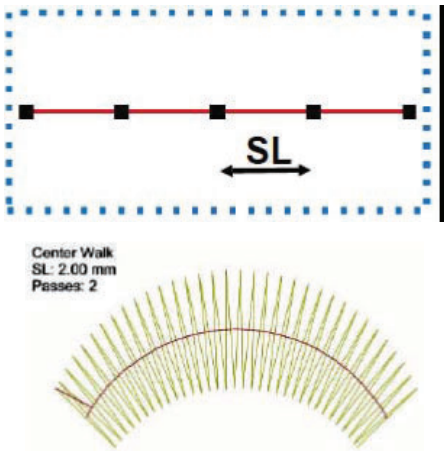


Underlay is the term most commonly used for a group of stitches. The main purpose of the underlay is to sew and secure the fabric with support and to prepare the area before the bulky filling of the area and provide a flat surface for the top. This will result in less fabric movement. At the same time, stitches are made with design.

Another purpose is to prevent the garment from appearing on the fabric after embroidery is finished, especially in most places where it is sewn with filler patterns and sewn over larger areas.

In this document, you will find information about different types of underlay that can be automatically generated for your sections (depending on the size of the software) and how to use them. The most basic type of underlay makes the passes for the running stitches. Moreover, they follow a path to the center of the section.

Fig 4



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SOT(Embroidery) - Zig-Zag Embroidery Machine Frame Fitting and Precautions

Practices of running Zig Zag stitches on different lines and Shapes

Objectives: At the end of this exercise you shall be able to
- **state the introduction of zig-zag embroidery machine**
- **describe the setting of zig-zag embroidery machine**

Running Zig - Zag stitches on different lines and shapes

Straight line

The tension on the upper and lower tension of the sewing machine should be equal to tension of thread coming from the spool and the thread from the spool and the thread from the bobbin.
Failure to maintain top and bottom tension will result in poor basic stitches use the correct needle and should point towards the back of the machine. Press the food pedal to start sewing.Keep stitching on the design and then release the foot pedal and switch off the machine and finally cut off the loose threads.

Sewing of dotted lines

To sew a dotted line on zig-zag machine, thread tension and bobbin tension should be same.Fix the fabric to the frame and start to sew. The seam should not be straight stitching instead should be stitched like small dots.That means 2 stitches first and then 3 stitches and 5 stitches should to be done and alternate stitch.There is no opportunity to practise well by sewing on a zig - zag sewing machine.

Rounded leaves

The upper and lower tension of zig - zag sewing machine must be same. Fix the fabric on the frame. Draw circular leaves or circular flowers on the fabric and start stitching on it.Move the frame slowly according to the designs and stitch according to the direction of design. After placing the circular design in this way remove unneccesary threads at the back.

Pointed leaves

The upper and lower thread tension in the sewing machine should be held on the frame.Designs with sharp leaves should be drawn on the fabric and stitched like a 'V' shape while sewing on a sewing machine.

Diamond shape

The upper thread tension and bobbin tension should be moderate.Fix the fabric in the frame.Diamond shaped design should be drawn on the fabric.The designs out lined with running stitch and use the zig - zag stitch like a diamond stitch pattern.The design should be stitched slowly by moving along the direction of the design.Continue the same procedure throughout the design.Remove the threads after completion of sewing.

Running stitch

Running stitch is one of the simplest stitches that is used to create a design or texture.
The design should be drawn on the fabric and then the fabric should be stretched and fixed on the fabric and the thread should be drawn properly. Adjust the tension. Adjust the thread tension and bobbin tension , so that the tension in both should neither be too tight or too lose. Pull out the thread from the bobbin.Here the upper thread should be kept in lose and the bottom thread tight in the machine.Start sewing over the drawn lines and sew the outline with coloured threads and then gradually sew each part from right to left or straight.Complete the design by this method.

Running shade

Shade work is done with different coloured threads.Running shade work is done by drawing the design on the fabric. While choosing the thread to be stitched light and dark shades of colour should be used.According to this stitch, the tension of the top thread should be lose and tension of the bottom thread should be tight.

Back Stitch

Back stitch is used as design outline and filling stitch.Texture should be drawn on the fabric. By zig - zag sewing machine finish the outline and complete the inner design.

Filling Stitch

Filling a design with all or multiple stitches.Draw the design on the fabric and then pin it on the frame.Each petal of the flower should be embellished with various types of stitches.

Satin Stitch

Satin stitch is also known as "damask" stitch.It is formed by close working of primitive stitches.

Cording Stitch

Cording stitch is also used to stich the outline of the design.Cording stitch requires cording thread.

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Introduction to Hand Aari

Objectives: At the end of this exercise you shall be able to
- **introduction to aari hand embroidery**
- **explain the stitches used in aari work.**

Aari Embroidery Introduction

Aari embroidery is a method used to decorate clothes with a needle and a thread. Different types of embroidery styles and techniques are used in embroidery. The word Aari is derived from the work aari or the kind of needle used to do this work. It is a kind of beautiful embroidery work done with aari needle. The advantage of the aari work is that it is possible for even very small embroidery.

Aari Chain Sewing

Aari work is done by stretching the fabric into a frame and sewing with a long hook, different sized frame, the needle and the thread exclusively for aari work.

Needle

1 Tambour and lunelle

2 Crewel

Texts

1 Silk

2 Zari (gold and silver)

3 Cotton

The aari embroidery looks lilke chain stitch. Hold the needle in the right hand and insert it into the cloth. If the thread is pulled up from the back, it brings a chain stitch.

Different types of pattern lines can be created with aari embroidery. Straight lines, curves, Sharp lines, square lines could be sewn.

Lock stitch

Lock stitch is called knot sewing. This is the opening stitch of the chain stitch in aari embroidery.

Starting stitches

Starting stitch is a form of chain stitches. These kinds of stitches are excellent and such small starting stitches are the basis of aari embroidery work.

Knot Stitches

Finishing stitches are otherwise called as knot stitches. The knot stitches becomes a seam and ends the embroidery neatly.

Curved Stitches

Curved stitches are normal stitches. Chain stitches and curved stitches are found to be in this kind of stitches. By practising such small chain stitches, needle and embroidery work, it becomes easier to stich in front, upside down and other directions.

Utilities & scope of aari works

Objectives: At the end of this lesson you shall be able to
- **utilities and scope of aari work**
- **different types of sequens**
- **explain the stitching method of sequins.**

Sequins are round discs used for decorative purpose. They are available in over a dozen popular colors. Sequins are frequently used on clothing. Sequins are available in a number of styles.

Sequins types :

Flat sequins, cup sequins ,big sequins, pet sequins, copper sequins, laser sequins & iron.

1 Halo grame.

2 Metallic.

3 Crystal iris.

4 Transparent irides scent.

5 Opaque irides scent.

6 Crystal opaque.

7 Silky & glossy.

8 Moonshine.

9 Satin.

10 Clearance .

11 Printed sequins.

12 New halogramme shapes.

13 Halograme circles - new.

14 New metallic shapes.

15 Large squares.

Sequins comes in many shapes, from the typical circle to stars , flowers, snow flakes, Octagons and hexangons. It

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made to be attached to fabric from the edge or middle of the sequins.

Cup sequins are usually round and unlike the common flat sequined bead have a faceted surface and a can cave bowl like shape that helps reflect and catch light.

The different types of sequins are small size dated sequence are called SITARA other sized sequences are called devadas.

Colour: Transparent colour, laser colour, rainbow colour wood colour, metal brushed colours.

Size : 2mm to 100mm sizes of are available.

The needle used for aari work is needle no .14, which is hooks shaped at one end and round shaped at the other end. It can have plastic or metal handle.

Aari works can be done with zari thread, cotton thread or silks thread etc,. Only chain stitch can be done with aari needle.

The main advantages of aari work are :

- Bead works can be done.
- Zardosi works & can be done.
- Sequence works & mirror can be done.
- Small embroidery can be done early.

The different types of sequences are :

1 Small size dated sequences are called sitara

2 Other sized sequences are called devadas.

Sequence works have been famous since mughal period. Even a simple aari works enhances the material to a large extend.

In present days,aari work plays an important role in fashion world both in traditional and western world. The traditional wears includes, bridal dresses, western wears include party wears.

Frame Fitting

Stretched frame is a wooden or metal frame. It's another name is called adda. Mostly wooden frame is used for aari work.

Stretched frame is a wooden adjustable frame consisting of four wooden bars. Frames are a variable in different sizes. The height of the frame is 1,5-2 feet above the ground 4 to 6 persons can sit on both the sides.

Which gives the cloth a uniform tension also the frame can be made to fit any size of fabric. The fabric is stitched on to the wooden frame using thick cotton thread. The cloth on which the embroidery is supposed to be done is stitched on the two horizontal bars and stretched. It is fixed tightly and locked on the other two vertically parallel bars. This prevent the cloth to move while working and also enable clear vision and faster movement of the tool

Small metal frames may also be used if the embroidery focus is in a small area.

The cloth is pulled tightly to prevent it from moving while works on it. The frame enables fasts works and clear vision.

Tracing method for aari works - pounce method

Tracing the design on the plain cloth. The design is first sketched on a tracing paper or butter paper and small holes are made on the outline of the designs using a needle. Therefore the cloth is placed on the frame the tracing sheet is placed on the position the design is required mixture of chalk powder and kerosene. A cloth dipped in either of the two solutions is rubbed on the tracing sheet so that the solution seeps through the holes and reaches the cloth. This the design get traced on the cloth.

Material and Stitches used in Hand Aari

Objectives: At the end of this lesson you shall be able to

- **explain sequence lines**
- **sequins or chamki.**

Introduction

Sequins are small spangles used for decoration. It is used on dresses or other fabrics. They are mostly available in circular shape and other shapes too. It is available in different colour. Thus, sequins and these threads are invaluable and very expensive metal threads. It is becoming the currency of the Middle East countries and Mediterranean countries. They were used as coins in those countries. They are attached with women's clothing as a symbol of wealth and status. The word sequins is derived from the Arabic word Sikka that means coin. Sequins worked dresses look new and gives an attractive look to the wearer during festivals.

Dresses look perfect with the help of sequins. Sequins bags are often worn regularly and the dress are used as evening wears. Sequins are used in scarves, hair accessories, belts, casual wears are decorated with sequins.

Sequins are stitched on a cloth. Thus they are attached to the edge of the fabric. It is used to decorate the professional costumes of dancers and skaters. It is used to enhance the performance of gymnasts. Many handicrafts are made using sequins. For example, they are used as eyes of animals and other creatures. Doll costumes are decorated with sequins. Moreover, they are also used to reflect snow, light, water , jewellery and to add brightness to the craft items.

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Different types of Sequins

Different types of flat sequins are available in various measurements like 2 mm, 2.5 mm, 3 mm, 4 mm, 5 mm. Small flat sequins are available. They are used in toys and decorative items. 3 mm flat, round sequins are available in more than 60 different colours. 4 mm and 5 mm metallic sequins are available in satins, gradient and opaque materials.

Flower sequins

Flower shaped sequins are available in different sizes ranging from 5 mm to 8 mm. They will give an elegant and fresh look when sewn. This kind sequins is preferred by most of the people. More than 35 different flower shaped sequins are available in the market. (Fig 1)

Fig 1



SON141741

Cup sequins

Cup sequins are usually not round and flattened, but the surface and shape of cup sequins would be like a concave bow that reflects light. (Fig 2)

Fig 2



SON141742

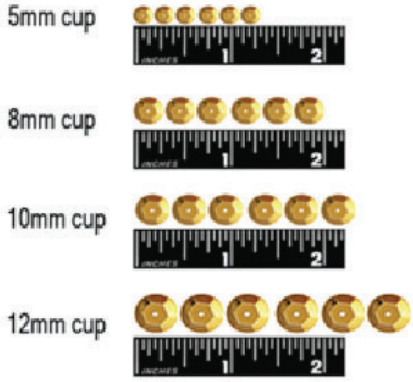
A cup sequins is available in a variety of shapes and colours. These are available in different sizes ranging from 5 mm, 8 mm, 10 mm and 12 mm. (Fig 3)

5 mm and 8 mm cup sequins are generally used. They are used in sari, kameez and other various fabrics.

Leaf sequins

Leaf sequins are only used to decorate wall hanging curtains. They are also used in cushion covers, belts, caps, sleeves, clutch, purse. (Fig 4)

Fig 3



SON141743

Fig 4



SON141744

Buck Sequins

It resembles an error and its colour attracts people more than any other sequins. It is available in different sizes and mainly used in clothing. This consists sequins on both sides. The cup area faces the clothes on right side all the way. (Fig 5)

Fig 5



SON141745

Round Hole Sequins

Sequins with a large hole are suitable for working with thick yarn. This type of sequins is especially used in crochet and network.

Star sequins

There is not requirement to sew for star sequins. This is often worn in shoes and in evening wears. It is in the shape of a star. (Figs 6 & 7)

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Fig 6



SON141746

Fig 7

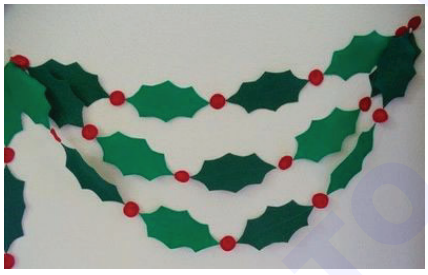


SON141747

Small Sequins

This is like Holy-leaf sequins. The only difference is it is smaller than the holy sequins. (Fig 8)

Fig 8



SON141748

Paillette Sequins

Paillette sequins are originally flat base center hole round mini metal discs. They are designed in such a way that they can be hung from the pieces. It is metal plate with polished ornaments respectively. It is usually found on the special occasion costumes and the press paillette are available with two holes. (Fig 9)

Sequin Applique

Sequin Applique is a fabric embroidered with sequins. Flower, stars, sun, moon and other geometric shapes form sequins applique. This gives a unique look. Moreover, to give a neat and elegant look, cotton fabric applique, design, beads, zardosi and kundan are added. (Fig 10)

Fig 9



SON141749

Fig 10



SON14174A

Ornamental Sequins Flower

Sequins flowers dazzle in clothing, caps and shoes. Sequin flowers are directly sewn on the fabric or they are stuck with fabric glue. Variety of sequins are used to make sequin flowers. They are created in a variety of designs. Many rows of petals are created by man's creativity. (Fig 11)

Fig 11



SON14174B

Antique gold colour

This type of golden beads are used for aari work.It is available in variety of sizes 2mm, 3mm, 4mm,5mm.(Fig 12)

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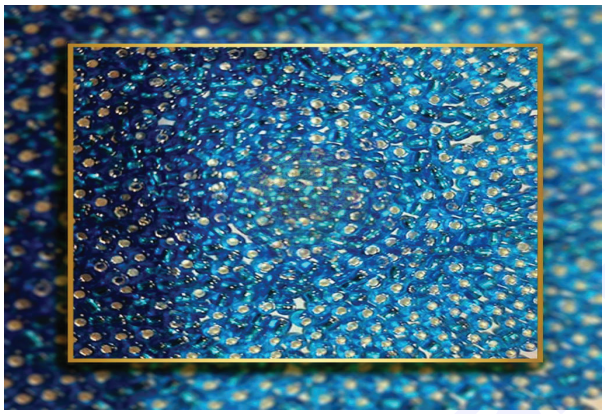
Fig 12



Small beads

Bead work is the art or craft of making things out of beads.Beads can be woven by using special threads.By using fine stretchable strings these beads can be tied or patched on the fabric surface.Beads are also made of many natural materials.(Fig 13)

Fig 13



Half beads

These have flattened surface on one half and cylindrical structure on the other side.Half beads are available in several sizes.They are mainly used for aari work.It is available golden colour.(Fig 14)

Drops Beads bunch antique

As they look like water drops these are named as drop beads.These are available in many colors and sizes.(Fig 15)

Aari needles

Aari needle is hook shaped at one end and circular at the other end.It contains a plastic or metal iron handle.Needle numble 14 is used for aari work.(Fig 16)

Gold and Silver Thread

Zari or metallic threads are used for aari embroidery work.Different colour threads are being used. (Fig 17)

Fig 14



Fig 15



Fig 16



Fig 17



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Stitch Formation

Objectives: At the end of this exercise you shall be able to
- **explain the chain stitches in aari work.**

First the tracing of the design is made. The design is then transferred onto the fabric. At times, the craftsman spontaneously draws the pattern on the fabric. This is done using a normal lead pencil. But usually the design is first drawn on a tracing paper. Using a needle, holes are pierced all along the lines. Next, this is placed on the fabric. A mixture of kerosene and robin blue is made and rubbed with a sponge on the tracing paper. It seeps through the holes and is transferred to the fabric.The main tool used in this style of embroidery is the aari, a hooked needle, from which the style gets its name. By using subtle gradations of color the figures and motifs in the designs can be highly representational. The next step is to stretch the fabric taut over a frame called the adda. This concept has evolved from a knockdown bed called the khatia used in rural areas. It follows the assembly and tightening principles of the khatia, and gives the cloth a uniform tension. Also the frame can be made to fit any size of fabric. The adda consists of four wooden spars (sometimes, bamboo is used for the end members) resting on wooden posts. A smaller metal frame may also be used if the embroidery focus is in a small area. Aari embroidery is done by tightening the cloth to be embroidered upon the khatia (cot) or adda frame and then doing the thread work on portions on the stretched cloth with an aari or crochet-hook like instrument. The stitch that forms resembles a chain stitch. The actual embroidery involves pushing the needle through the fabric. From behind, thread is pushed into the hook. When the needle is pulled up again, it comes up with a loop. The next time, the needle goes through the loop and comes up with another loop through the previous loop. The same process is repeated. The stitches are very fine and small. After the embroidery, the thread is beaten down or flattened using a wooden mallet from the top, with a hand held wooden anvil placed under the fabric. This settles the thread and gives the work a fuller and finished look. This process is only for zari work.

Aari Embroidery is a traditional art form passed down through generations in the Indian subcontinent. The technique involves using a hook-like needle called an Aari to create intricate and detailed embroidery designs on various fabrics. While the basic stitches of Aari Embroidery are relatively simple, the advanced stitches can take months or years to master. This article will take a closer look at some of the most challenging and beautiful advanced Aari Embroidery stitches.

Chain Stitch

Chain stitch is a basic stitch and one of the essential stitches used in Aari embroidery. The chain stitch is a looping stitch that creates a chain-like effect, hence its name. To make a chain stitch, the needle is brought up through the fabric and then down again in a nearby location. The thread is then pulled through the needle and fabric loop, creating a looping chain.

Fig 1



One of the unique features of the Aari chain stitch is that it can be worked on both the right and wrong sides of the fabric, making it a versatile stitch to use. On the right side of the fabric, the stitch creates a raised, decorative effect, while on the wrong side, it creates a more subtle, flat effect.

In Aari embroidery, the chain stitch is often used to create outlines and borders for motifs and designs. It can also be used to fill in areas of a design for a more solid look. The stitch can be worked in a straight line or a curved or angled pattern, allowing for various design possibilities.

When working the chain stitch in Aari embroidery, keeping the loops uniform in size and spacing is essential to create a clean, consistent look. It is also vital to secure the stitch at the beginning and end of each chain to prevent the loops from unravelling.

Bullion Knot

The bullion knot is a dense, raised stitch that creates a three-dimensional effect. This stitch is made by wrapping the thread around the needle several times before pulling it through the fabric. The number of wraps and the tension used can affect the final appearance of the stitch. Bullion knots are typically used to create flowers, leaves, and other intricate details.

French Knot

The French knot is a small, tight knot used to create small dots or other details. The thread is wrapped around the needle once and then pulled through the fabric to make a French Knot. The French knot can add texture and interest to any Aari Embroidery design.

Detached Chain Stitch

The detached chain stitch is versatile and can create various effects. This stitch is created by making a small loop of thread and then pulling the needle through it to create a chain-like effect. The detached chain stitch can create outlines, borders, and other details in Aari Embroidery.

Feather Stitch

A feather stitch is a versatile stitch often used as a filling stitch. This stitch is created by making a series of tiny, diagonal stitches that overlap. The feather stitch can create various textures and patterns and is often used to make flowers, leaves, and other natural elements.

Fly Stitch

The fly stitch is a versatile, decorative stitch that can create various effects. This stitch is created by making a small loop of thread and then pulling the needle through it to create a chain-like effect. The fly stitch can create outlines, borders, and other details in Aari Embroidery.

These are just a few examples of Aari Embroidery stitches that can create stunning and intricate designs. Mastering these stitches takes time and practice, but the results are well worth it. Once you gain expertise on the different Aari Embroidery stitches, you can create gorgeous and intricate designs.

Process and techniques

Objectives: At the end of this exercise you shall be able to
- **understanding the process and techniques in aari .**

Introduction

The basic stitch used in aari work is chain stitch.It is the foundation of all the other stitches of aari embroidery.The steps of doing chain stitch are discussed in this unit in detail.Aari work can be done with any variety of threads like silk, cotton, zari,wool,etc.But to begin with, zari is preferable, to avoid frequent breakage of thread.

Chain Stitch

Chain stitch is worked from the bottom of the fabric towards the front side or top side of the fabric attached on adda.The thick chain (madhkan) paani and butt filling, fansa chain, etc., are all chain variations.

Bead and sequin work is quite simple.While doing chain stitch itself, bead or sequin is dropped in each loop of the chain to generate a line or series of beads or sequins.Beads and sequins are available in variety of shapes and sizes.One can select them as per usage in the design.For beadwork, longer tip needles are used to collect multiple beads together in it.Similarly, sequins of different diameters are available which can be used as per need.

Needle used

- Tambour or luneville
- Crewel needle

Threads used

- Silk
- Zari
- Cotton

Staring stitched

Initially the required type of fabric is stretched and tied to a frame to remove loose folds, With the help of a lead pencil or chalk powder the design traced on the fabric. After tracing combination of color threads or golden thread is embroided along the traced design.

Locking stitch

Aari needle is pushed through the fabric and thread from the reverse side is hooked in the needle and pulled out from the upper side. Needle is again inserted in the fabric a little distance away from the previous and pulls the thread out locking the previous stitch. This process is continued till the required pattern is formed on the fabric.

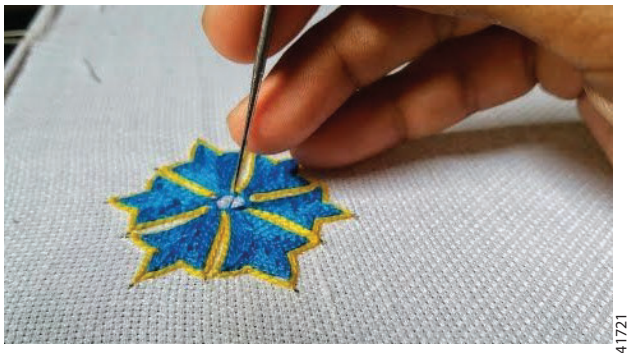
Finishing stitch

Design are embellished with golden or silver threads known as zari and embroidered with stone and beads which gives the fabric an elegant rich look. Once the design is embroidered the fabric is tied to the reverse side and fabric glue is applied on the design to strengthen the stitch so that the threads don't got loose and come out.

Formation of stitches

Golden threads or wires are cut into required length for aari work. The work is initiated by stitching the thread along the outline of the traced or printed design. Further stones are added to the embroidery. Glue is applied on the centre of the design where artificial stones are glued . Embroidery with golden threads are made around the centre stone to complete the design. Similar method is used for bigger design as well. Few design are embroidered with various colors of threads and stones. Once the embroidery is finished the fabric is cut into required shape.

Fig 1



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Sewing Aids

Objective: At the end of this lesson you shall be able to
- **explain the tools and its uses.**

1 Aari needle

It has a hooks at the tip of one end and wooden handle at the other end back. The needle are also available with plastic and iron handle.

2 Zardosi

There are spring kind of threads they are cut into small size and used as per the requirement.

3 Gold & silver thread

Zali or metallic threads are commonly used for aari works. Threads of various colors are used.

4 Silk thread

Silks thread which available is variety of shades and colors.

5 Shiny stones

There are available in different shapes, sizes and colors.

6 Small beads

There beads come in different shapes and sizes.

7 Sitara

Sitara are small spangles, golden and silver colors.

8 Sequins

Sequins available in many shapes of the typical circle to star & flowers.

9 Tube beads

The glass beads with cylindrical structure

10 Stretched frame (adds)

It is wooden adjustable frame consisting of four wooden bars. The colth on which the embroidery is supposed to be done is stitched on two horizontal bars and stretched. It is then fixed tightly and locked on the other two vertically parallel bars.

Scissors

it is used for cutting the fabric with blent paint on upper blades prevent fabric from tearing while being cut.

12 Pin cushion

It is used for wrist or table

13 Hand needle (or) crewel needle

Needle have a long oval eye are there fore easily threaded. The most suitable size for general hand sewing is crewel no .9

14 Embroidery scissors

Sharp pointed embroidery scissors are essential. The handle are longer. They have narrow and pointed blades. They are used for cutting fine and short threads.(Fig 1)

Fig 1



15 Thread cutter.

It is used for trimming the thread with spring action blade.

16 Mirrors

There are available in varies of shapes like round shape and diamond shapes and square shapes.

17 Sequence lace

Sequence lace is a soft, available in many and more shades.

18 Tapestry needle

A tapestry needle is a blunt needle with a large eye. The large eye is useful to needle workers because it can accommodate threads that are thick ordinary sewing thread.

19 Stiletto.

It is stainless steel, has a light weight to it, in perfect smooth. It has very sharp tip.

20 String (or) Nails.

It is used for stretched wooden frame.

Fig 2



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Marker or the line used by tailor

It is used to indicate the measurements in the cloth. This is available in rectangle different colours. (Fig 2)

Tracing sheet

It is thin less weight paper to transfer the shape to the cloth very minutely it shows the design shape.

Pencil

This is in setting the shape, this and to transfer the accurate shape of the object is used.

Scissors

Fig 3



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To cut the aligned paper or to cut the laying paper, it is in small size and it is having just blended tip. Handle of this tool is made of by plastic or wood or metal.(Fig 3)

Embroidery scissor

While doing embroidery work, to cut the tied up thread it has sharp ends.

Trimmer

This trimmer is used for alignment, has sharp ends. This is scriber to embroidery scissor. When doing embroidery work it is ready to handle by the palm of the hand.

Metal thread

Fig 4



SON141733

Metal thread is similar to lengthily thread. T decorate garments. It is used for long periods. To wore with metal thread it is little difficult, metal thread id available is gold, copper and silver colour.(Fig 4)

Connection of dresses series designed by means of metal thread, and to carryout ebb rated embroidery work it is used. In India the metal thread embroidery work is employed is places Guajarati, Surat and at varnasi.

The lost stage of rubber/diamond pattern used to bring out the wire to very thin similar to human hair is called as Batla and the wire at the end is flat. Now a deep Kasep/Kala pathuna is done in silk cotton thread.

Fig 5



The small packages is called as chitra. Small dots under motlaval is called as mukesh. Each metal piece has 19 micron thickness. This is equals to 1/3 of the human hair diameter.(Fig 5)

Zari threads

Zari is a kind of olden days Indian and Pakistan dresses used threads made by good quality gold and silver. This thread is used to form complicated shape designs privately in silk cloth. This cloth fashion dresses required in various trades - Mostly silk sarees and in kakrak jary it is very important items. It is used in skirt and tops scarier to silk dresses.

This is made by pure gold flat metal piece by way of twisting or made by silver or by polyester, film embroidery sarees and garment items generally used pune silk metallic thread jary is medley used.(Fig 6)

Fig 6



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Types and characteristics of sequence Lines & Guides

Objectives: At the end of this exercise you shall be able to
- **explain basic stitches in aari embroidery.**

Chain stitch

Chain stitch is one of the most popular basic embroidery stitches of aari work. It is used for both outlining as well as filling a design. It can be done side by side to fill large shapes or to work single lines. The result of this stitch is a loop, which will be form a link. The link can be of varied lengths, shorter the prettier. (Fig 1) Chain stitch is a basic stitches of aari work. Aari works are various types based on chain stitch. There are (Fig 1)

1 Satin stitch
2 Butterfly stitch
3 Zig Zag stitch
4 Carding stitch
5 Blanket stitch
6 Filling stitch
7 Long and short
8 Artwork

Fig 1



Cording stitch

This may be otherwise known as laid work or 'V' shape. When thread to be used is too thick to go through fabric easily. Gold thread is used for ecclesiastical embroidery and all of it appears on the surface. In cording work chain stitches are used for cording variations. Suitable for free hand designs. Your only limitation on this is your own imagination. Most suitable for stems, outlining areas, raised effects

Satin and butterfly stitch in aariwork

Satin stitch is also known as damak stitch. This is one of the oldest stitch and is used for filling not to broad space. It is used in different traditions embroidery forms of India, China, and Japan.

Working with this stitch is simple. Long stitches are made very close to each other following the pattern margins bring the loop up through the fabric and make a single straight stitch. Again punch and pull the loop very close to the 1st stitch and continue to fill the shape.

Satin stitch should be take not to use for broad areas as the stitch tends to loosen with time. Butterfly stitch is known as satin stitch.

Blanket stitch in aari work

Blanket stitch is based on chain stitch. Blanket stitches are worked to form a floating blank stitch combined with knot. The finished blanket stitch is some ways resembles a letter "L" depending on the spacing of the stitches. This stitch type is used for both outlining as well as filling some small designs. The length of the stitch taken according to the width of the design being worked. This stitch is more suitable for freehand design.

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Application os straight and Curved Lines

Objectives: At the end of this exercise you shall be able to
- **explain about aari work**
- **how to embroidery straight & curved lines**

Aari work

Embroidery refers to the thread craft that enhances the look of a fabric or product. This thread craft is generally done on natural fabrics with tight weaves. Embroidery designs of India are influenced by different cultures and have a flavor of their own. Indian embroidery is cherished by craftsmen and has the world swooning over them. Embroidery designs are formed on the basis of texture of the fabric. It may also include decorating materials other than threads, like pearls, beads, stones and sequins. India is known for its beautiful embroidery techniques. Fundamental stitches of embroidery are running stitch, cross stitch and satin stitch. Surface embroidery technique are more economical. Aari embroidery is one of the many forms of embroidery, originated in the Mughal era. Aari work is a type of embroidery work that is done by stretching the fabric tightly over a wooden frame. A pen like needle, that resembles a crochet needle is used to do the Intrinsic Aari work.(Fig 1 to Fig 4)

Fig 1



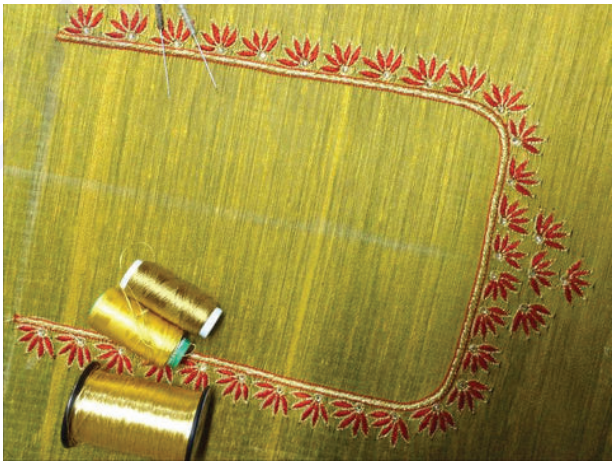
Fig 2



Fig 3



Fig 4



Aari art work is popular for its fine and delicate thread work. Aari work enhances the essence of hand embroidery. It is largely practiced in Ahmedabad. The kind of stitch that is used for Aari work embroidery is chain stitch. Since Aari work has its origin from the Mughal era, motifs of Aari work are derived from nature. These motifs include leaves, vines, flowers, trees, birds and animals. Embroideries used in ethnic fashion are distinguished from the Aari embroidery because of these motifs. This type of embroidery has its place in contemporary fashion as well. (Fig 5)

Aari work embroidery uses beads and stones to create a sparkling effect on the garments. These embellishments are placed in such a way that they create an intrinsic web like pattern to create an intrinsic look. Aari work is more of thread and needle work; however, stones and other embellishments are used to add richness to the embroidery. Aari work is considered appropriate for all seasons as it can

Fig 5



be done on velvet, silk, cotton, cotton silk, chanderi, and many other fabrics. This makes Aari embroidery products suitable for people of all demographics. Hand embroidery Aari work is used to create intricate designs all over the garment or on certain parts of the product to enhance its look.(Fig 6)

Fig 6



Aari work is considered as the most time consuming needle and thread work. Today, with the help of advance technologies, Aari embroidery work can be completed in lesser time. Aari work designs on sarees are appreciated by women of all age groups. Aari work is done mainly on the body of the sarees, keeping the blouse plain. Similarly, Aari work on Kurt's is done with emphasis on the bodice and border which catches the eye of the observer. Aari work on dupattas also, looks alluring and grabs the attention of many. (Fig 7)

Making of Aari work

The fabric is first stitched tightly over the wooden frame to remove uneven folds of the fabric. Using a thick cotton thread, the fabric is sewn on to the wooden frame. This does not spoil the grip of the fabric and let's you form intricate patterns over the fabric. More often, zari, cotton, and silk threads are used to make Aari work embroideries. Fine patterns of embroidery are one of the main features of Aari work. Generally, craftsmen and artisans embellish the Aari embroidery work with sequins, stones and other embellishments to enhance the look of the embroidered patterns.

Fig 7



Aari work embroidery

Since this embroidery works well with all seasons, it has an increased demand across the globe. Traditional and ethnic jewelry goes well with Aari work garments. Sets like Kundan sets can be well paired up with such garments, forming high acceptance for these embroidery techniques. Footwear with such garments needs to be chosen wisely. Stick to neutral shoes such as regular heels to decorate your outfit well.

Aari work embroideries are easy to maintain. Dry cleaning such garments is recommended for the fabric. Soft ironing and gentle hand wash is also advised. The Design Cart offers you Aari needles to make beautiful Aari work embroidery.

How To Embroider Curved Lines Neatly And Smoothly

It can be a challenge to embroider a smooth, gentle curves. Pretty much everyone that embroiders has struggled to get curved lines looking nice and neat. If you feel like your outline stitches are looking a bit jagged and messy, you're in the right place! This post will provide some tips and tricks for embroidering curved lines that will almost instantly improve the way they look!

Disclaimer: This post has some affiliate links in it. I receive a small commission from purchases at no additional cost to the buyer. I only recommend products I would use and love and that are of good quality. All opinions are my own!

How to Embroider Curved and Straight lines Neatly and Smoothly

It can be a change to embroider a smooth, gentle curves.Pretty much everyone that enbroiders has struggled to get curved lines looking nice and neat.

Best Embroidery Stitches For Curved Lines

Curved outline embroidery stitches

Back Stitch

The back stitch is the easiest of the stitches to work curved lines. Make sure the stitches are short and even along the line. Making back stitches too long will cause the line to look jagged. The end of each stitch should share the same hole as the start of the next one.

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Chain Stitch

The chain stitch is a relatively easy stitch to embroider curved lines. Make sure of keeping the stitch length the same size, because it can be a bit more obvious when the stitches aren't even.

Stem Stitch

The stem stitch can be a bit more challenging to get right when stitching curves. Make sure to keep the stitches short and keep the working thread to one side as the working is stitch so the stitches all lay the same. Also be sure that keeping the stitches directly on the marked line and not to the side, which is easy to do with this stitch.

General Tips For Embroidering Smooth Curved Lines

Use High Quality Embroidery Floss will make the stitching process way nicer and easier.Use floss that has a nice sheer, is durable, and is colorfast.

Use The Right Size Needle

Make sure choosing the right size needle in relation to how many strands of thread are used. If too big needle is used, it can create holes in the fabric where the stitches are, which cause the line to look irregular and not smooth.

Use Natural, Evenly Woven Fabric

Natural, evenly woven fabrics such as linen or cotton are best for embroidery. The tight, even weave of the fabric is great to stitch on because it allows to stitch freely on it. If a fabric with an uneven or loose weave is chosen it will affect the way your stitches look. Most of the time, this will result in visible holes or jagged stitches.

Use more strands of Thread

Sometimes using a few more strands of thread (~3-6) can be a bit more forgiving than only stitching with one or two strands. It can hide small imperfections sometimes.

Shorten Your Stitch Length

Since making straight stitches on a curved line, it will be more obvious and the line will appear more jagged if the stitches are too long. Focus on making short, even stitches.

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Drawn and pulled thread work

Objectives: At the end of this lesson you shall be able to
- **explain about drawn and pulled thread**

Hem stitching is the most common type of drawn thread work. It is called hem stitching because as it groups threads with in a drawn border, it hems the edge below the border.

Drawn thread work known as pulled thread work form of counted thread embroidery based on removing threads from the warp and weft of even weave fabric.

The remaining threads are grouped or bundled together into a variety of patterns. Many type of styles of drawn thread work use in embroidery.

The most basic kind of drawn thread work is hem stitching. Drawn thread work is often used to decorate the trimmings of clothes or household lines. The border between hem stitching gave fancy and more styles of drawn thread work.

There are two basic types of drawn thread work. Hem stitching and needle weaving both used primarily for border decorations on table cloth and hand kerchiefs. Fabric threads are drawn out in same way in both hem stitching and needle weaving.

Working method of drawn and pulled thread

Drawn and pulled thread work is counted thread embroidery in which specific filling stitches are worked as groups and pulled very tightly in the working.

This compacts the threads of the cloth and creates a pattern of holes. No threads are removed from the fabric. It is worked on a loosely woven even weave fabric.

The cloth should have a small space between the threads counting is easier and the hole becomes more prominent. Closer fabric will be easier to learn on and see.

Must be worked in a specific way on the front and back because the threads path on the back side of the cloth help to compact the fabric threads. In a certain way each stitch having its own characteristic kind of hole.

The thread path on the back is just as important as the thread path on the front in creating this characteristic hole pattern.

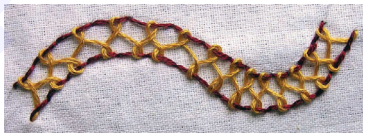
Standard stitches used in surface embroidery which create their own patterns when pulled tightly in geometric precision.

Thread used for the pulled stitches should be of the same thickness as the fabric threads and similar in colour. Whatever color of cloth fairly closely matched by the embroidery threads using a darker or lighter shade for the outlining stitches can be very attractive.

An embroidery hoop & tapestry blunt pointed needles used for the pulled stitches. Outline stitches are also earlier done with blunt needles and sharp or blunt needles are used depending on the stitches.

Do not let your needle run out of thread in the middle of a row because running the thread into end it may make an irregular spot in the middle of the area of holes. Always complete an entire row with same thread. The loosely woven fabric suitable for this kind of work because they frays too easily (Fig 1).

Fig 1



LADDER VARIATION



SERPENTINE VARIATION



KNOTTING VARIATION



LACING VARIATION

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Assisi work

Objectives: At the end of this lesson you shall be able to
- **describe about assisi work**
- **Introduction to assisi work.**

Assisi work is famous typical embroidery based on ancient italian needle work. The name is derived from the italian town of assisi.

Assisi embroidery is variation of cross stitch. One of the oldest known stitch. It is a type of counted thread embroidery.

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The even weave fabric is especially good for this work because their even threads help guide to stitches.

Work style

This embroidery design are left empty and background filled with cross stitch. Designs are outlined by Holbein stitch to emphasize the motif. (Fig 1)

Fig 1



Needle

Tapestry needle is used for even weave fabric and sharp pointed needle are used for other fabric.

Fabric

It can be done on any fabric suitable for embroidery. But the even weave type fabric are good for assisi embroidery.

Stitches

The main stitch used in assisi work is cross stitch for filling background area and holbein stitch for outlining the design and to emphasize the motif.

Designs

Animal figures, Geometrical shapes and floral motif can be used. (Figs 2 & 3)

Fig 2

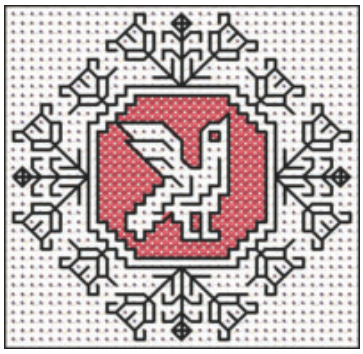


Fig 3



Cut work

Objectives: At the end of this lesson you shall be able to

- **describe about cut work**
- **Introduction to cut work.**

Cut work is an for of open embroidery work. It is done by both hand and machine . Primarily for table cloth, blouse and sarees also. In cut work, each part of the design is outlined by fine button hole stitch.

Large cut out areas are reinforced with embroidered bars. French knot, stem stitch, chain stitch, eyelet work is added to enhance a cutwork design.

Closely woven fabrics should be used for cut work. Pearl cotton thread and other silk or cotton can be used. Sharp pointed oval needle no 9 & an embroidery hoop or frame are used for cut work.

Generally the motifs used for cut work are florals, but other kinds can also be used. In choosing a design consider what areas will be cut away.

A motif is established by cutting away its main sections. That is the small flower in the sample are stencil designs or a motif can be left intact and background.

Swiss work

Objective: At the end of this lesson you shall be able to

- **describe swiss work embroidery.**

Introduction to swiss work

Swiss work is the famous typical embroidery known as 'Broderie Anglaise'.

It is a kind of white emboridery. This embroidery is done by hand. It is well known form of artwork. Swiss work is worked on fine line with white embroidery cotton threads basically satin stitch is used in this embroidery.

This embroidery is series of various size of holes arranged in floral or geometrical patterns. Out line of the shapes run around with threads and then center cut with small and

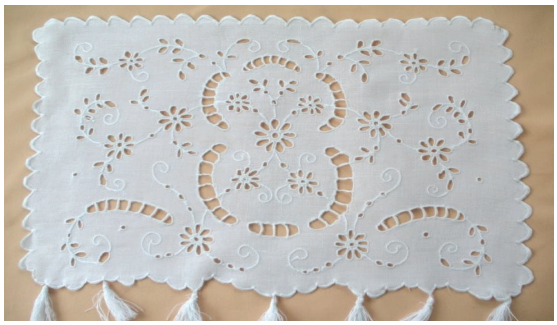
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sharp scissors or the punched out with an embroidery stiletto (Fig 1, 2 & 3)

Fig 1



Fig 2



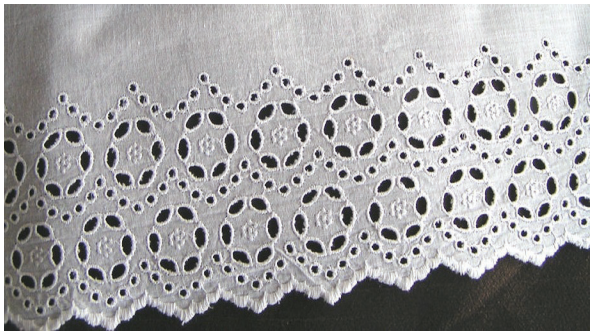
Needle

Sharp point needle can be used for this embroidery work.

Fabric

White fine linen and cambric fabrics are suitable for swiss work embroidery. Other light colours such as pink, peach and cream are also can be used.

Fig 3



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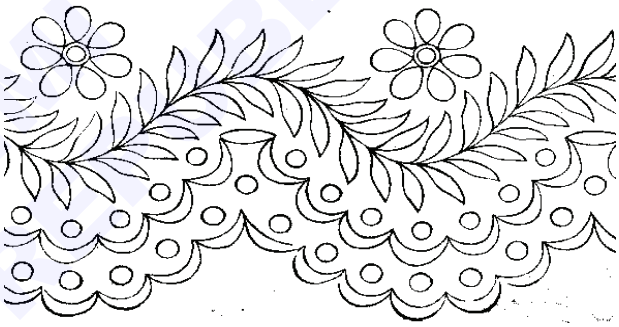
Stitches

This hand embroidery work stitches.Other is done using satin stitch and other stitches used in this embroidery are button hole stitch, over cast stitch and running stitch.

Design

Different geometrical shapes, scallops, vines, leaves and flowers can be used for swiss work embroidery. (Fig 4)

Fig 4



Shadow work

Objective: At the end of this lesson you shall be able to
- **describe shadow work.**

Shadow work is delicate hand embroidery. This stitch is worked as two lines of back stitches alternatively between the rows. When stitched on fine and sheer fabric the under stitches show through making a lovely shadow effect.

Shadow work is simple form of two sided embroidery. This work can be done in two ways.

1 Double back stitch or reverse herring bone on the right side of the fabric. (Fig 1)

2 Closed herring bone on the wrong side which will appear as back stitch on the right side. (Fig 2)

Fabric: Choice of ground fabric is very important in shadow work any type of sheer fabric is suitable for this embroidery such as organza, voil, muslin, chiffon, georgette, silk, organdi, etc.

Thread: mostly the work is done by cotton thread. But any kind of embroidery thread can be used for shadow work like floss thread, silk thread and even woolen.

Designs: common motifs include paisely,flowers, Creeper, etc. (Fig 3)

Fig 1



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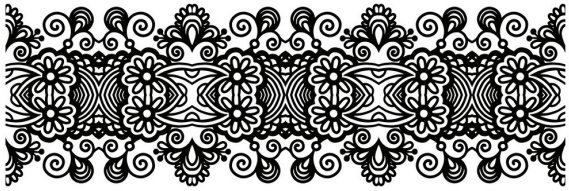
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Fig 2



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Fig 3



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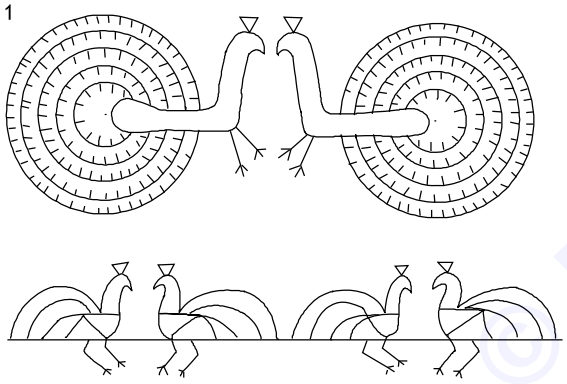
Phulkari

Objectives: At the end of this lesson you shall be able to
- **explain the introduction of phulkari**
- **explain the uses of phulkari fabric**
- **explain the uses of theread**
- **explain the uses of needle**
- **explain the uses of motifs**
- **describe tracing method**
- **describe phulkari stitch**
- **explain types of phulkari.**

Introduction to Phulkari

Phulkari is famous traditional embroidery of punjab phul means 'flower" and "Kari" mean work. whole fabric is so embroidered that no part of the base Fabric is visible called (Fig 1)

Fig 1



STYLISHED BIRDS

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Fabric

Hand spun and hand woven khaddar is the base material for phulkari embroidery.The base fabric is available in three varieties, khaddar being a loosely spun and coarsely woven fabric and the other.

Chaunsa khaddar

A handspun and handwoven textile mode of fine yarn that is used as a base Fabric for Phulkari or Bagh embroidery.

Thread

Soft, glossy, untwisted silk thread, known as pat mostely bright color thread are used. Sometimes cotton and woolen threads were used.

Needle

Ordinary needle used in phulkari work.

Motifs of phulkari

i **Geometrical motifs:** Geometrical motifs were used such as triangles, squares veritical and horizontal line with changing directions and make a motifs.

ii **Vegetables/ Fruits and floral**

Genda (Marigold), Sarajmukhi (Sun flower), Motia (Jasmine) Commonly used for phulkari among the different fruits Orange, chair, mango slice used as motifs for a phulkari. Among the vegetables karela, gobhi mirchi and dhaniya.

iii **Birds & animal**

Peacock, parrot, cow and goat.

iv **Jewellery motifs**

Guluband , Ranihaar, Karanphool and Tikka,

Tracing method

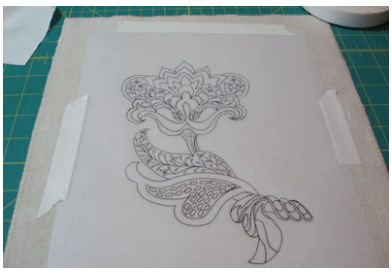
The design of phulkari are seldom traced but have been worked by counting both warp and weft threads. (Figs 2 & 3)

Fig 2



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Fig 3



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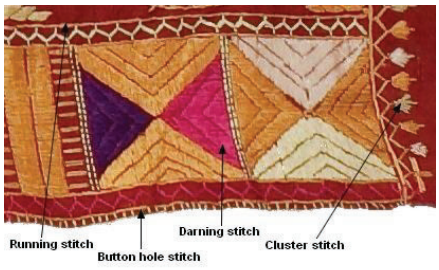
Stitches are used

1 Darning stitch was the most commonly used technique to make phulkari.Other stitches like the herring bone

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stitch running Stitch, Holbein stitch or button hole stitch were seldomly used (Fig 4).

Fig 4



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2 Types of phulkahi

There are mainly two types of phulkari one is “Bagh” and second is “Chope”. The phulkaris have different types according types colors, designs, fabric, threads used, and it usage (Figs 5 & 6).

Fig 5



CHOPE PHULKARI

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Fig 6



BAGH PHULKARI

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Types of Phulkari Bagh

a Bawan bagh

b Vari cla bagh

c Ghunghat bagh

d Darshan dawar bagh

Types of chope

a Chope

b Suber

c Til patra

d Saloo

e Sheeshedar

f Panchrangh / Satranga

g Sainchi

h Dhoop Chhaon (Sunlight and shade)

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Kantha

Objectives: At the end of this lesson you shall be able to

- **explain kantha embroidery**
- **describe material**
- **explain colors, threads, stitichs**
- **describe motifs**
- **explain about process of kantha**
- **explain types of kantha.**

Introduction

The traditional folk art of Bengal is famous as kantha which means “Patched Cloth”. It is an embroidery on many layers of cloth (like qualiting) with running stitch.

Material

Kantha was done on old discarded saris or dhotis.

Threads colors / Stitches

Threads used for embroidery are mainly white red, green, yellow, black in colour.Cotton threads are usually used for embroidery, sometimes used silk threads were used. Running stitch is the main stitch of this embroidery but sometimes chain, stem and herring bone stitch are also used (Fig 1).

Fig 1



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Motifs

Different Patterns like birds, fishes, lotus flowers, boats, umbrella, yolk stories, Mythological background, elephant, peacock and owl are used.

Process

There are two method of working. In the first style the embroidery starts from the centre and ends by outlining the motify or vice versa.

Fig 2



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Types of Kantha

1 **Arshilata kantha** - are small covers for mirrors or toilet accessories with wide, colorful borders.

2 **Baiton kantha -** is a square wrap used for covering books and other valuables. They have elaborate borders.

3 **Durjani kantha -** these are quilted wallets made out of rectangular kantha pieces.

4 **Oaar kantha -** is a pillow covers in simple designs and a decorative border is sewn afterwards.

5 **Lep kantha -** is a rectangular wrap heavily padded to make warm quilts. The whole piece is stitched in a wavy pattern. Simple embroidery is done on the finished quilt.

6 **Sujani kantha -** is a decorative kantha used as blankets or spreads during religious rituals or other occasions.

7 **Rumal kantha -** is used as absorbent wipes or plate's coverings. They also feature a central lotus with ornameted borders.

Kasuti

Objectives: At the end of this lesson you shall be able to
- **explain the introduction of kasuti**
- **explain about fabric used in kasuti**
- **explain the uses of kasuti threads**
- **explain about colours used in kasuti**
- **explain about motifs and types of kantha.**

Introduction: kasuti is a world famous embroidery of karnataka state earlier was known as mysore state, the motifs and art is a part of women's world. kasuti embroidery speaks about the people of karnataka their traditions, customs and professions.

This is an outcome of the honest,zealous and innate desire of mankind to practice the beautiful stitches on the articles of every day. The urge of loving kasuti was common to both royals,aristocrats and peasant women.

The most important world famous cave temples of badami and the magnificent shrines of a hole an pattadakaller of badami taluk. It is said that kasuti resembles the embroidery of Austria,hungary and spain.

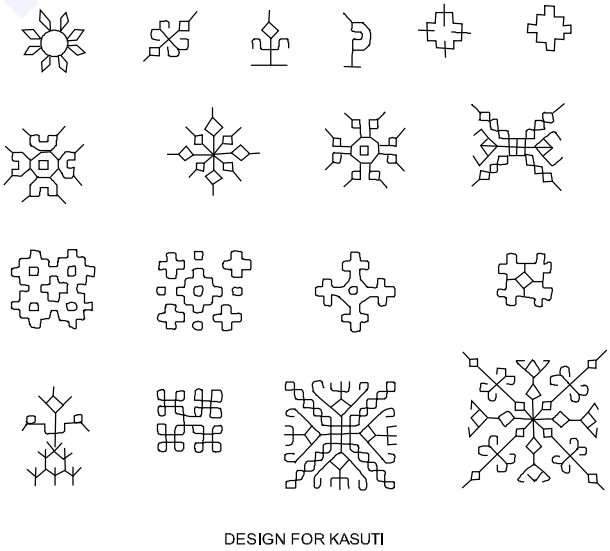
Fabric: Kasuti can be worked neatly in matty cloth, canvas and cotton fabric.

Threads: Silk threads or mercerized cotton threads are used.

Colors: Orange, green, red and purple are the common colors in use. The famous color. Combinations are red, orange, green, orange, purple-red, pink-purple, blue - orange, white is used on black or dark background.

In other words they used all bright and contrast colurs to make the design appear more bold and clear.

Fig 1



DESIGN FOR KASUTI

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Motifs : The motifs used in kasuti embroider are taken from the temple architecture, Lotus, Gopuras, Palanquin, Chariot, Lamp stand, elephant, Parrot, Peacock, Swan, and bull (Nandi).

Stitches

Kasuti is done always by counting the threads. The four types of stitches are Gavanti, Murgi, Negi and Menthi.

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1 **Gavanti -** It is a double running stitch, gavanthi may be worked in horizontal, vertical or diagonal directions. (Fig 1)

2 **Murgi -** It is a zig-zag holbein stitch. It is same as gavanti stitch.(Fig 2)

3 **Negi -** It is the ordinary stitch which is known as darning or weaving stitch, worked in long and short straight lines.(Fig 3 & 4)

Fig 2

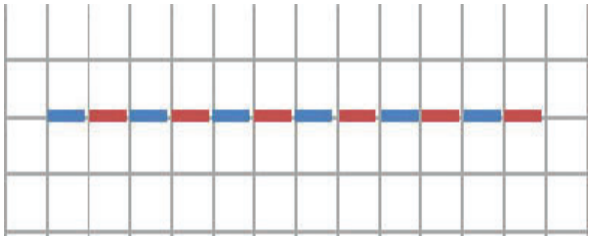


Fig 3

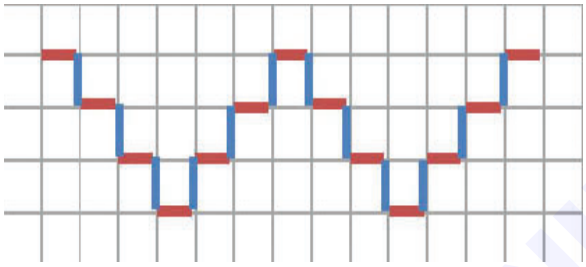
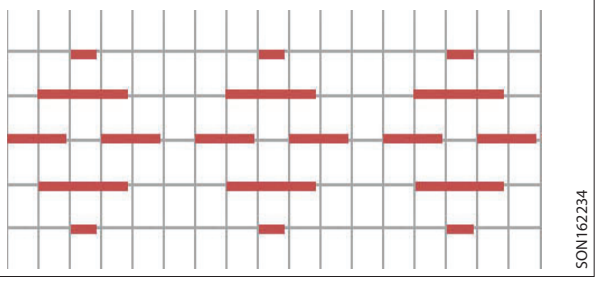
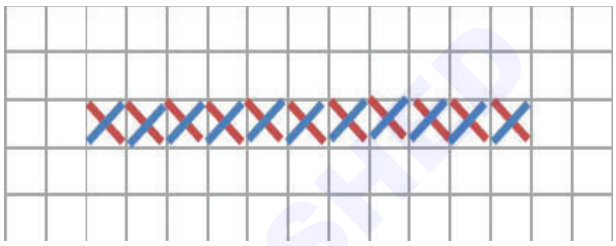


Fig 4



4 **Menthi -** It uses the typical cross stitch to fill in the motifs (Fig 5).

Fig 5



Chikankari

Objectives: At the end of this lesson you shall be able to

- **explain about introduction to chikankari embroidery**
- **explain about uses of fabric in chikankari**
- **explain the uses of thread in chikankari**
- **explain the uses of stitch in chikankari**
- **explain the types of chikankari.**

Introduction: Chikankari is a delicate hand embroidery usually done with white thread on white fabric. Chikankari, chikan means “to raise” and kari means “to work”.

Fabric: Chikankari is done on the white muslin background now a days fine cotton material like voile, 2x2, cambray, mulmul, organdi, chiffon, georgettes, and other similar fine fabrics are used.

Threads/Threads colour

Mostly un polish thread used sometimes cotton and silk used for embroidery. Thread colors like white, pink, mostly light color are used.

Motifs

Paisley, flowers, creepers, fruits, birds like peacock and parrots.

Stitch

Back, Stem, Button hole, Satin and Herringbone stitch used.

Tracing method

The designs are prepared and transferred on the wooden block, with the help of inscribed wooden blocks, the design are impregnated on the material with washable color by simple stamping technique.

Types of chikankari

Chikankari can be divided into three categories

1 Flat stitches

2 Knotted/Embossed stitches

3 Jali work

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Kashida kashmir

Objectives: At the end of this lesson you shall be able to
- **state the kashida kashmir**
- **explain about uses of material in kashida kashmir**
- **explain about uses of stitches in kashida kashmir**
- **explain about uses of motif in kashida kashmir.**

Introduction

Kashida of kashmir is a famous embroidery of craftmanship. The craftsman involved in this craft draw their inspiration from the beautiful kashmir valley. It is practiced mostly by men and is reality commercial craft.

Fabric

The fabric used for embroidery may be pashmina, woolen, silk or cotton.

Threads

Cotton, Wool and Silk are used for embroidery.

Colors

The most common color in this embroidery are light and dark shades, such as crimson red, scarlet red, blue, yellow, green, purple, black and brown.

Stitches

The system of working kashida used darning stitches. It is a simple running stitch, which gives a woven effect on the shawl. Stem stitch commonly in darker shades it used to give shape to the motif by outlining it. Other stitches count satin, chain and button, hole.

Fig 1



Motifs

A large variety of flowers lily, lotus, tulip, saffron and iris fruits bunch of grapes, apples, birds and leaf is also an important motif.

Types of woven kashmiri shawl

1 Pashmina shawl
2 Doshala shawl
3 Dorukha shawl
4 Kasaba shawl
5 Jamewar shawl

Fig 2



Chamba

Objectives: At the end of this lesson you shall be able to
- **explain the introduction to chambarumal**
- **explain uses of fabric and thread.**
- **explain uses of chamba.**

Introduction to Chamba Rumal: Chamba Rumal is famous traditional of Himachal Pradesh. Rumal is persion word which means "Kerchief". Square piece of cloth worn on the head or around the neck.

Two different styles one elegant and fine in draught-manship and the other one some course and bold in treatment.

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Mandi, suket and Bilaspur the type of embroidery was different from the style prevalent in chamba. Rumals with floral and bird motifs were called hathapura used for marriages.

Stitches used. Satin stitches.

Fabric and threads: Hand spun and hand woven cotton (khaddar) or fine muslin of off white colour (Fig 1).

Motifs used : Leaping tigers, peacock, parrot, bagh, veena, sitar, tabla.

Colour used: Red, Blue,off white colour.

Fig 1



STYLISHED CHAMBA MOTIF

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Themes of chamba rumal

1 Rasmandala

2 Kaliya daman

3 Samundra manthan

4 Battle karuk shetra

5 Rukmini haron

6 Raga ragini

7 Minjar mela jalus

8 The gujjar theme

Godhuli

Literally the hour of cow dust this refers to a rural scene the cloud of dust that is raised when the cows return home at dusk.Often Krishna and his cow-herd friends are depicted bringing back the cows, a picturisation made more colourful by depictions of woen watching, birds flying, nad fish swimming in the water.(Fig 2)

Radha Krishna

The depiction of Radha and Krishna on a pavilion is extremely colourful.The pavilion is two-tiered Radha and Krishna, with attendants are on the first pavilion, while music and other activities are taking place on the ground floor.Depictions of trees, peacocks, and birds indicate that the pavilion is in the garden.

Raasmandala

The Raasmandala or the various raasilas of Krishna are popular subjects, especially as they combine colour, activity, and movement.In the rumal that depicts the Raasmandala with Laksmi-Narayana, a four armed Vishnu and lakshmi are seated on a double - petalled lotus, flanked

Fig 2



Fig 3



by adoring monkeys. Around them dance, five blue - skinned krishnas, interspersed with five gopis.There is a male drummer in the forefront, and women musicians in ecah corner.The spaces are interspersed with beautiful flowering shrubs and peacocks in vibrant colours. (Fig 3)

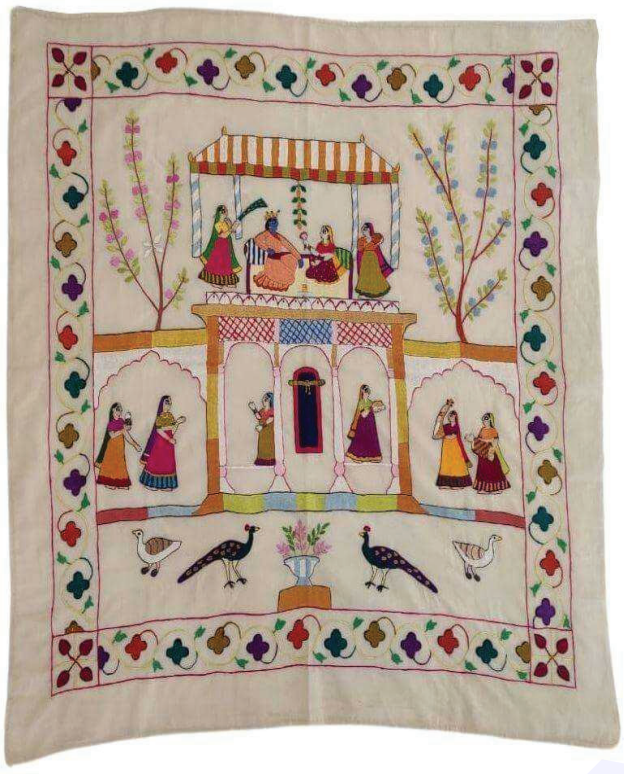
Parijata Hara

Parijata or Kalpa - vriksha, the boon-giving tree, was one of the treasures churned out of the ocean in the treasures churned out of the ocean in the great samudra - mathan(samudra = ocean ; manthan =to churn) .The tress was taken by the God of war and rain, ladra for his garden.The story depicted by the rumal is that of the Theft

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(haran = abduction / theft) of the tree by krishna, and the ensuring fight in the heavens between Indra seated on his white elephant and Krishna seated on Garuda.Original rumal in the Crafts Museum, New Delhi).(Fig 4)

Fig 4



Jagannatha

This depicts the divine traid of the Jagannatha temple at puri (Odisha) - Jagannath,Subhadra, and Balaram - with bowls of offerings placed before them.The first floor enshrines the crowned figure of krishna along with Radha.(Original rumal in the Bhuri singh Museum,Chamba). (Fig 5)

Fig 5



Kutch work

Objectives: At the end of this lesson you shall be able to
- **explain the introduction to kutch**
- **explain types of kutch embroidery.**

Introduction

Gujarat the state situated in the western part of India, is famous for the embroidery of kutch and kathiawar. The farmer, tribal and ladies of other community, residing in the villages have maintained their tradition, culture and rich heritage. Heritage educated styles of embroidery.

Kutch embroidery

It is believed that the kutch embroidery was educated to "Mochis". Kutch embroidery has the base of various clans, such as Ahirs, Kanbis, Mochis and Rabaris.

1 Ahir bharat

Material

Base material used for ahir bharat was hand spun and hand woven coarse khaddar.

Stitches

Embroidery is done with chain stitch.

Color

The background is usually in dark color such as maroon or black.

Thread

Use silky outwisted floss or twisted silken thread.

Motifs

Birds, Flowers, Human figure, Dacing doll are used.

Article

The embroidery articles include blouses, jacket, and cap.

2 Kanbi bharat

Kanbis are the farmers. The women community is mainly involved in the beautiful art of kanbi bharat.

Materials

The embroidery is done on cotton material.

Threads

The embroidery thread used is cotton.

Colors

The embroidery thread is yellow, orange, green, white and purple color.

Stitches

The basic stitches employed are darning for out-lining and herringbone for filling.

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Motifs

Motifs, such as parrots, peacocks, creepers and flowers are used. However, the specific ones are sunflower, kevada, and the cactus flower.

Articles

The articles more repeatedly prepared are the rectangular covers spread on the back of the bullock; conical covers attractively tasseled to cover the horns; gorgeously embroidered veils to cover the forehead, face and muzzle; covers for chest; and quilts.

3 Mochi bharat

The needle work of kutch is famous known as mochi bharat. Mochis or cobblers were engaged in this craft earlier. The craft was also known as Ahir bharat because of the hooked needle used by ahirs for embroidering.

Materials

The material used as base for embroidery is satin.

Stitches

The stitch used for the embroidery is the chain stitch.

Motifs

Buttis (Polka dots), nadir shah butti (big dots), parrots, bulbuls, dancing peacocks, dolls, jewellery items, such as karan phul, that is flower shaped earrings, flowering bushes, and human figures in dancing poses.

Articles

The articles embroidered were ghaghras, cholies, torans, chaklas (wall hangings) and borders.

4 Rabari work

Rabari belong to a tribe of giri region, usually migrating from place to place. They use pieces of fabric to create a bold pattern, such as patchwork or applique work. The colored and patterned pieces are cut and then stitch together on a plain background.

Materials

Usually done on hand spun, hand woven khaddar or khadi material of maroon color.

Colors

This embroidery is done with light colors.

Stitches

Double cross stitch is the stitch used for joining the pieces.

Motifs

The motifs comprise beautiful birds, beasts, flora and fauna, and human figures geometrical designs.

Articles

It is done on tent, wall decorations, torans, chandrawas, cushion cover and other items of household use but not on garments.

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Fancy net

Objectives: At the end of this lesson you shall be able to

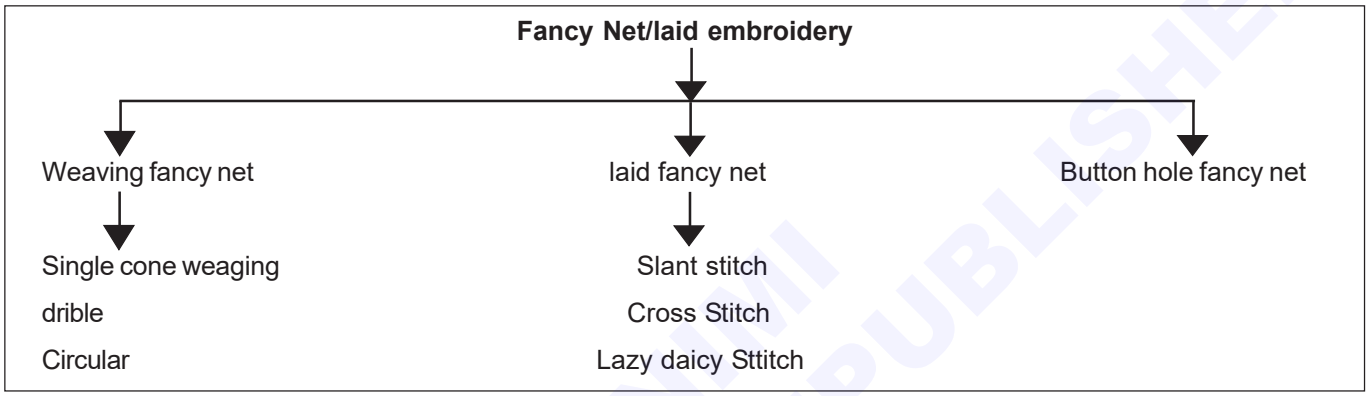
- **explain fancy net**
- **describe the types of fancy net**
- **describe the uses of fancy net.**

Fancy net also known as “laid embroidery” is combination of stitches.

The fillings of this embroidery can be dense and heavy or light and airy depending on shape and design. This work gives a ‘Net’ effect on fabric using threads and needle.

This embroidery can be worked using almost any type of embroidery thread . Even ribbon, wooly and thick fiber can be used as the ground thread.

The filling work can be done in single colour or multi colour. So this embroidery have many design possibilities.

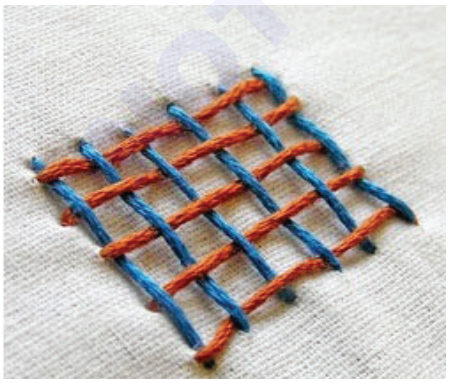


Weaving Fancy Net

This is a basis structure of stitch and also known as the queen anne stitch. It is a good filling stitch which can be done with single colour. It can be used instead of ‘ satin stitch’. Layers of parallel stitches are made vertically. Weaving through horizontal laid stitches going up and down alternately.

The stitches will cross each other at right angles. The space between stitches is subject to the design. This can be laid very close to each other or even spaced out (Fig 1)

Fig 1



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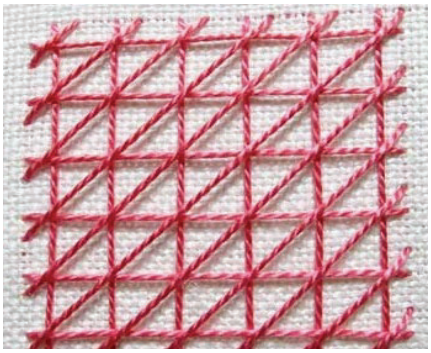
Single cane weaving

This stitch is a kind of diagonal weaving. After a basic structure of even spaced weaving fancy net, the thread is diagonally weave from the one corner to the another opposite corner.

The stitches will go diagonally up and down alternately. To weave over the Basic structure start from one corner and complete by moving another corner.

The stitches will cross each other at 45º angle. (Fig 2)

Fig 2



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Double cane weaving

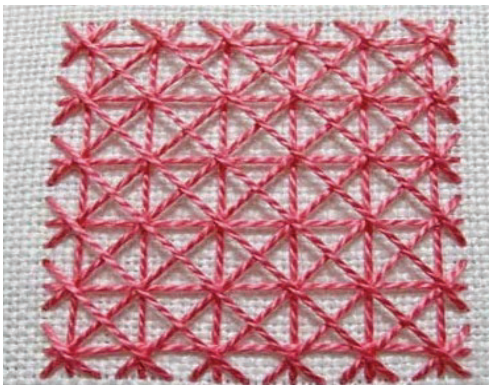
To do this type of embroidery first finish the single cane weaving.The thread is diagnolly woven same as single cane

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weaving. But this time to weave over the single cane weaving start from the opposite side corner of the design and then complete by moving another side . Now the stitches will cross each other.

It creates a box like pattern, and on the top of that, a diamond shaped pattern with an 'X' over every intersection. (Fig 3)

Fig 3

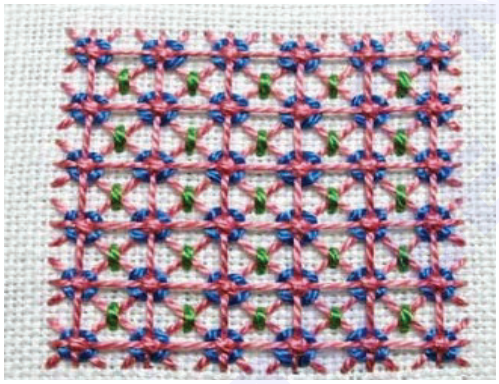


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Circular Weaving fancy Net

This work can be done over the basic structure of even based weaving fancy net. To do the embroidery start from the first top cross and then weave counter clockwise around the cross and finish to start point weave the thread circulary over the cross going up and down alternately. (Fig 4)

Fig 4



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Laid fancy Net

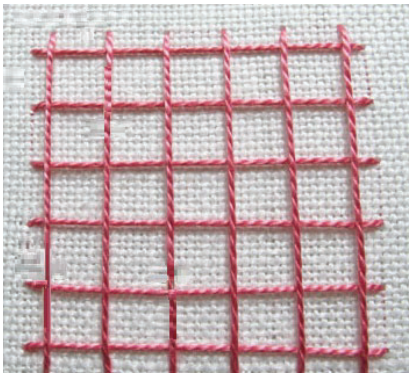
This is the basic structure of laid fancy Net. The basic structure is laid down, then tacked down at its intersections to keep them in place. This is usually done with contrast thread. The spacing between stitches will depends on the size of the area as well as the overall effect that is desired. (Fig 5)

It is also known as squared laid work. A ground of vertical and horizontal intersecting thread is placed on the fabric). The space between stitches is subject to the design and the person embroidering.

Slant stitch

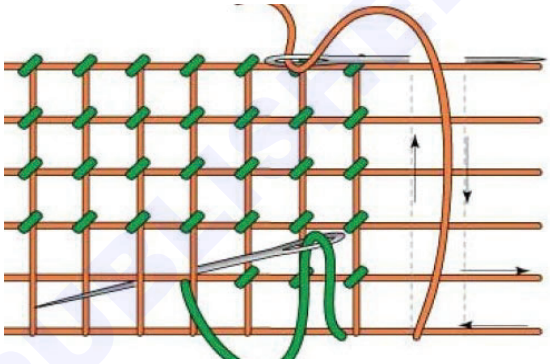
To work the stitch a ground of vertical and horizontal intersecting threads is laid on the fabric. These intersections of threads are tacked in place by a small slanting stitches. The direction of stitches depends on the over all effect that is desired. (Fig 6)

Fig 5



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Fig 6

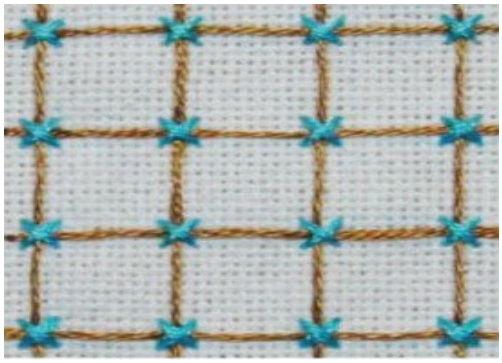


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Cross Stitch

An even ground of vertical and horizontal intersecting threads is laid on the fabric. Now these intersection of threads are tacked in place by a small cross stitches. (Fig 7)

Fig 7



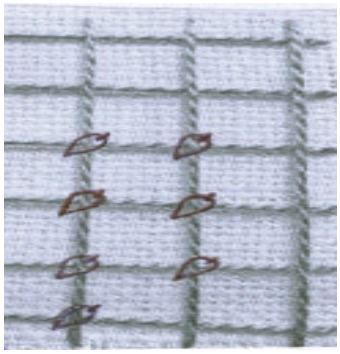
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Lazy daisy stitch

To do this stitch a ground of vertical and horizontal intersecting thread is laid on the fabric. Then these intersections of thread are tacked in place by a small lazy daisy stitches the direction of stitches depends on the overall effect that is desired. (Figs 8 & 9)

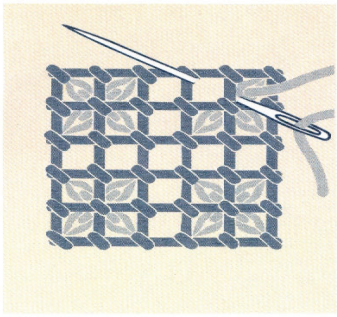
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Fig 8



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Fig 9

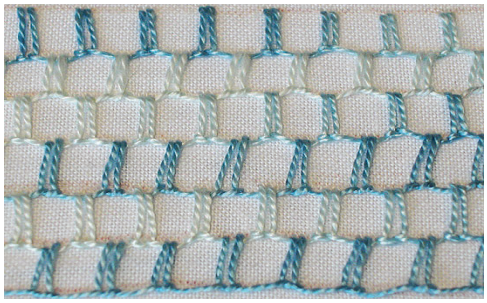


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Button hole fancy net

To work this stitch the ground work of vertical and horizontal threads is not needed. The area is covered using the rows of Button hole stitches. (Fig 10)

Fig 10



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Uses of fancy net

1 A large area of a design can be filled with this embroidery.

2 This is light and air filling.

3 This embroidery gives 'Net' effect on surface of fabric.

4 The filling can be heavy and dense depending on the spacing.

5 This work is very versatile and have many design possibilities.

6 Bead work can be done at the intersection to embellish the work.

7 This work can be done in any type of design and shape.

8 It consumes less time.

9 This work can be done on counted thread fabric.

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Applique Embriodery

Objectives: At the end of this lesson you shall be able to

- **explain the introduction to applique work**
- **explain about tools for applique work**
- **describe type of different applique.**

Applique is a smaller ornament applied to another surface. An applique is usually one piece. In the context of ceramics, for example, an applique is a separate piece of clay added to the primary works applique means. This is surface pattern that is used to decorate an aspect of garment.

Applique work is basically a sewing craft. Fabric- scrabs and pieces are usually adequate for a small project. Smooth surfaced light weight Fabric is used . Try to avoid loosely woven or extremely bulky, fabrics they can be very difficult to manage. Use a particular loose weave. Before using any fabrics, press out all wrinkless and creases.

Tools required : In applique works securing thread No.50 for additional decorative stitching, sharp and medium length needle No.3 excellent for hand stitching, sharp pair of scissors, marking pencil, thimble, round frames and hoops, tracing paper are used. Trace the design in perfect tracing method.

stitching method

Slipstitch works from right to left being needle and thread fallen edge of applique. Picks up a thread or two back ground fabric just opposite.

Applique by machine : The sewing machine is used extensively in applique works now a days because it makes it in less time than half the time it would take to do a similar project by hand.

They are basically two methods of machine applique. One is done entirely be means of straight stitching the other considerably stitch uses a combination of straight - and zig zag.

Difference between patch works and applique works

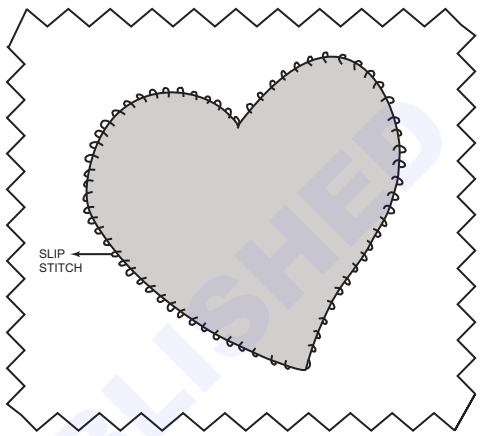
Patch works is assembling pieces as fabric together to make a patterned surface embroidery is the use of colored thread in a variety of stitch pattern and knots to create the design. It is typically worked on a stitched surface applique is fixed a variety of cut shapes on to a surface to create the design. It's similar to patch works except that with applique.

There are more layers.

Applique using freezer paper (Fig 1)

Freezer paper is a wax coated paper, the paper sticks firmly, but temporarily the fabric is pressed with a medium iron. It is non-stain and can be peeled off easily.

Fig 1



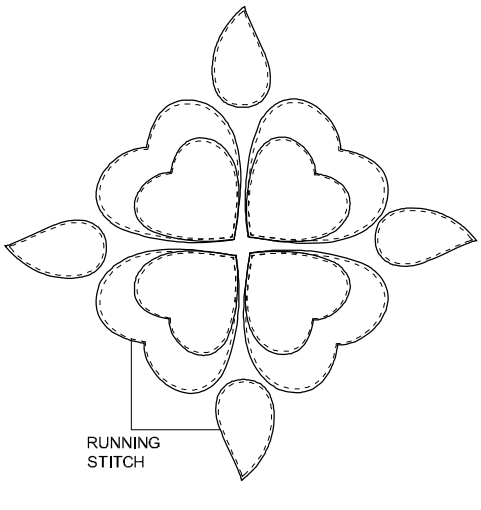
APPLIQUE USING FREEZER PAPER

Hawaiian applique (Fig 2)

This colorful and intricate form of applique has been practiced by the people of Hawaii since the early 19th century. Several distinctive features set Hawaiian applique apart from other applique designs. It is created using a paper cut-out and when complete, it is always quilted with row of echo quilting which are said to resemble the wave row of echo quilting which are said to resemble the wave lapping on the shore of the island home.

Hawaiian applique quilts are traditional made in two solid colors, typically vivid hues of red, blue, green or orange on a white background.

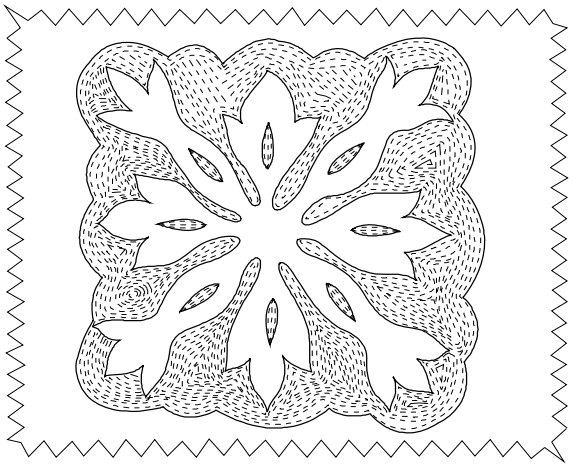
Fig 2



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Shadow applique (Fig 3) : Shadow applique is simple to work. Brightly colured fabric is sandwiched between a sheer top layer and a base fabric. The sheer top and base are traditionally white, but subtle and unusual effect can be achieved by using different colour instead. The applique design needs to be strongly coloured when the sheer top layer is placed over the top.

Fig 3

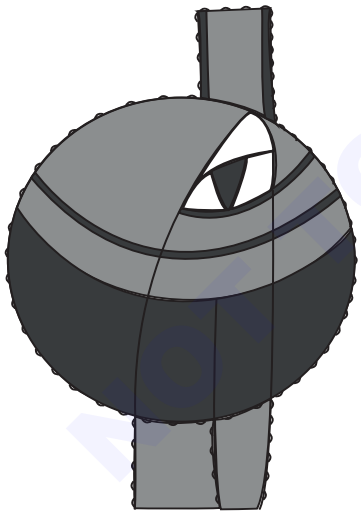


SHADOW APPLIQUE

SON172513

Stained glass applique (Fig 4) : The bright, bold colours and the simple shapes used in stained glass windows are ideal for applique design. With this technique, shapes are held together with a narrow fabric strip. In recent years, stained glass applique has become so popular that narrow sticky-back bias binding has been produced especially for this task. This tape is available in a range of colour as well as in the traditional black.

Fig 4

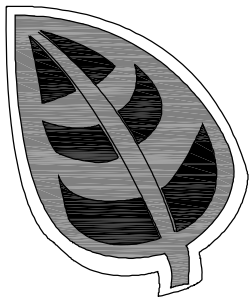


STAINED GLASS APPLIQUE

SON172514

Cut applique (Fig 5) : In cut applique, instead of adding pieces of fabric, sections of fabric are cut away from the right side to create a design. Extra colours can be added into section of the design to prevent the fabric layer from becoming unwieldy.

Fig 5



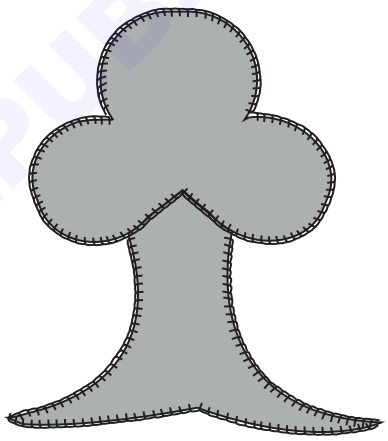
REVERSE APPLIQUE

SON172515

Velvet & satin applique (Fig 6) : These applique got its name from the application of type of fabric. Velvet or satin fabric with suitable colour is cut and applied on another fabric with satin or cording stitches.

As design is traced / transformed on the wrong side of the velvet or satin material,the cut images will be mirror image of the selected design. So the design should be traced carefully. Velvets and satin applique is applied on children's garments, wall hangings, table cover, cushion cover, bed spread, etc.

Fig 6



VELVET & STAIN APPLIQUE

SON172516

Patch applique (Fig 7)

Patch applique is a collection of scrabed fabric cut out of worn out clothes, are stitched together, to make a large or small patchwork design and fixed over the base fabric with simple slip stitches.

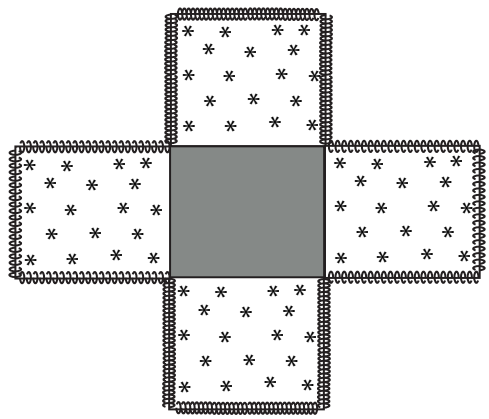
Patchwork applique not only creates geometric patterns but also human figures, trees, etc. All type of fabrics are combined in patch work applique. This applique can be used on the article such as bed spreads, pillow cover, table mats, cushion covers, etc.

Applique with sequins, zardozi and bead work (Figs 8 to10)

This applique is a combination of traditional applique with sequins or zardozi or bead. Traditional applique is nothing but a cut out design of applique fabric in a base fabric with simple stitches or buttonhole stitches.

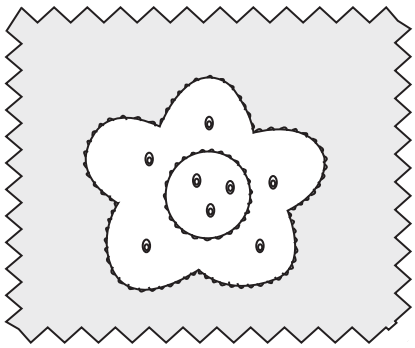
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Fig 7



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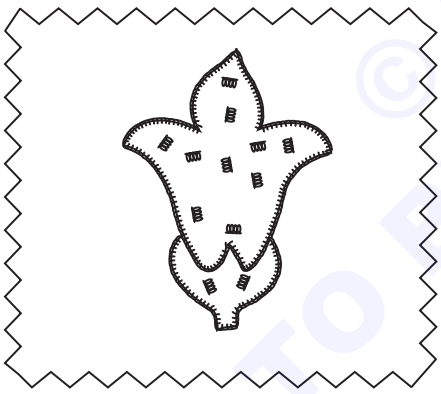
Fig 8



FINISHED APPEARANCE

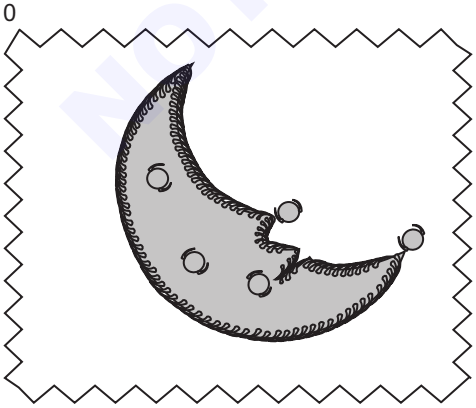
SON172518

Fig 9



SON172519

Fig 10



SON17251A

Sequins or zardozi or bead are used, just for an ornamentation work on applique. Application of sequins, bead and zardozi are made by hand stitches. This type of applique can be seen on ladies purse, wall hangings, roof hanging, etc.

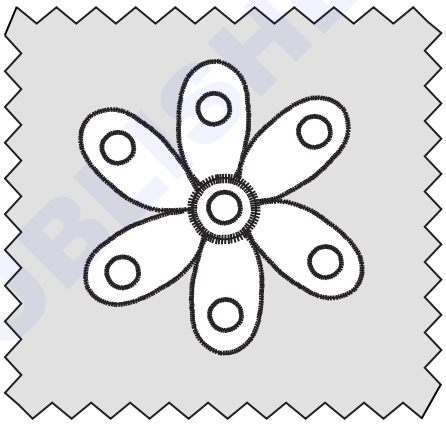
Applique with mirror and zari work (Figs 11 & 12)

Applique has evolved into highly decorative art and is used in various forms all over the world. This applique is also the combination of traditional applique with ornamentation of mirror and zari work.

Mirror is fixed or attached with buttonhole stitches on the applique piece of base fabric. Mirror is available in various sizes and shapes in the market.

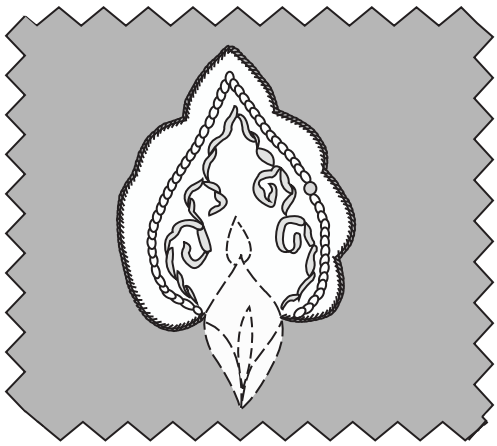
Zari work is made with zari thread at the inner portion on applique piece. Stitches like running stitch, stem, and chain stitches are used in applique with zari work.

Fig 11



SON17251B

Fig 12



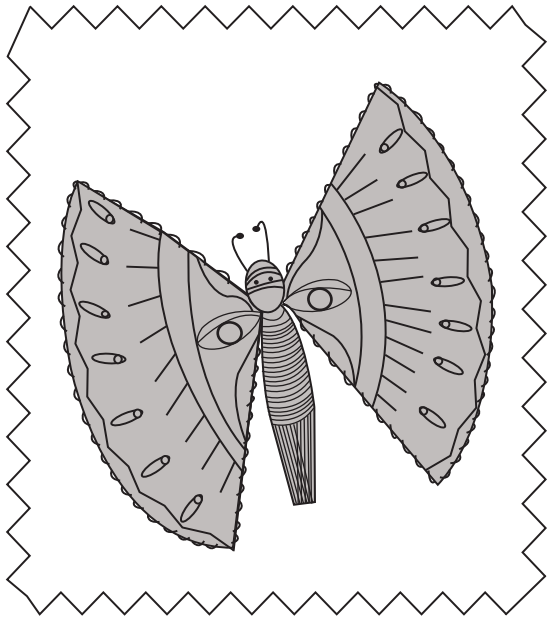
SON17251C

Baltimore applique (Fig 13)

The Baltimore applique quilt was kept for best because of all the work that went into it and also because it wasn't as hard wearing as a patch work quilt. The finest quilts were made by women in the Baltimore area. The beautiful wreath, garlands and baskets of flowers that adorned these 19th century quilt have become standard applique designs. These are built up in stage because piece overlap and are generally complex.

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Fig 13



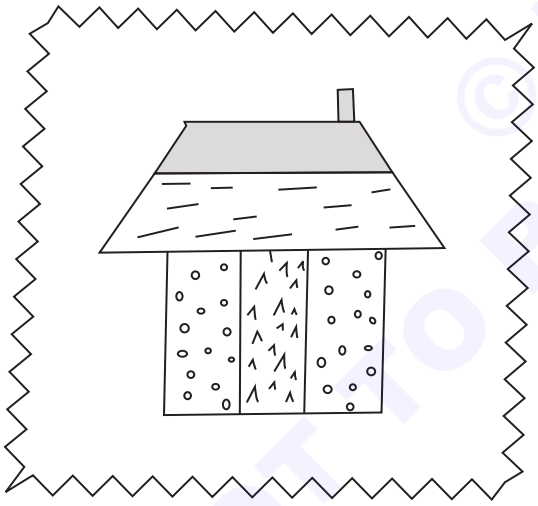
BALTIMORE APPLIQUE

SON17251D

Broderie perse (Fig 14)

Broderie perse is a technique of cutting motifs from one fabric. Rearranging them and stitching them to a new background fabric. The technique developed in the 17th and 18th centuries as a means of making precious fragments of fabric last longer.

Fig 14



BRODERIE PERSE

SON17251E

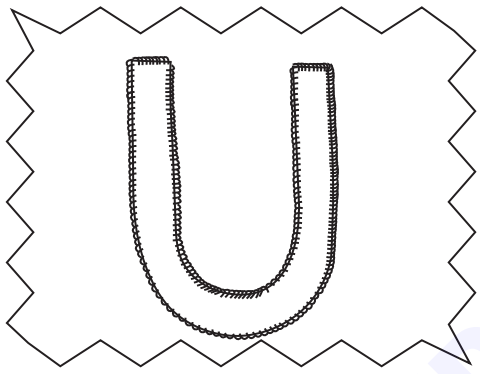
Letters applique (Fig 15)

Letters applique is an applique cut out piece of an alphabet with buttonhole stitches or slip stitches. Mostly any type of fabric can be used for letters applique. Velvet, satin, poplin, are some of the suitable fabric. Satin stitches are used for decorative purposes. Letters applique can be seen frequently on articles like gents' shirt, ladies' tops, hand kerchief, wall hanging, children's wear, etc.

Applique with ribbon work (Fig 16)

Ribbon work looks like a difficult type of embroidery. Satin ribbon gives a perfect silky effect. Narrow type of satin ribbon is specially designed for embroidery work. Satin ribbons are available in wide range of colours, widths, sizes, quality, etc, with quite expensive cost.

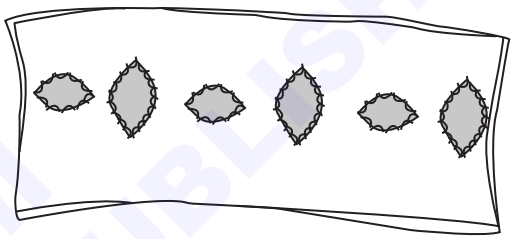
Fig 15



LETTERS APPLIQUE

SON17251F

Fig 16



APPLIQUE WITH RIBBON WORK

SON17251G

This applique is layered with two layers of satin ribbon with small tiny running stitches. These are fixed to the garments like ladies skirt; children's garments etc, Ribbon applique are mostly seen on wall hangings table covers, curtains, etc.

Applique with black work (Fig 17)

Black work embroidery is worked with black thread with cross stitches on matty cloth. Black coloured stranded cotton thread is mostly used for this kind of embroidery and it forms geometrical patterns. After the completion of black work embroidery on matty cloth, it is carefully separated and slip stitched on the base fabric. Satin and buttonhole stitches are not suitable for the fixation of applique piece.

This kind of applique is used on bags, purse, pillow cover, table mat, etc.

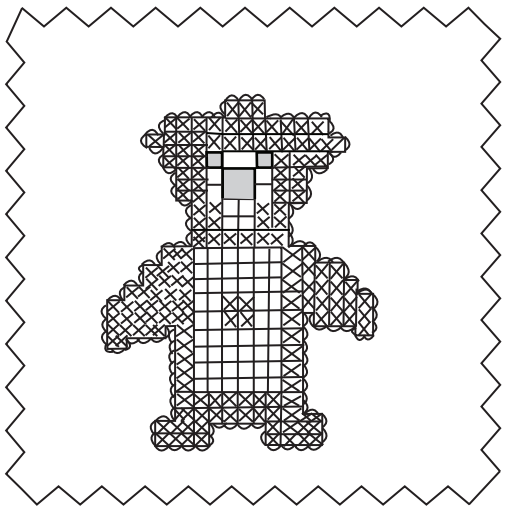
Gold cord applique (Fig 18)

Gold cord applique is nothing but an applique on raw cotton with zari thread, zardozi, beads, etc. Zardozi, beads are attached to the inner portion of the designs. Gold cord is attached to the outline of the design with couching stitches. Then the applique is cut away and slip stitched on to the base fabric. This is one of the expensive applique among all other applique types. This embroidery includes running stitch, stem, satin stitches, etc.

This applique can be seen frequently on article such as wall hangings, curtains, table covers, pen & pencil stands, etc.

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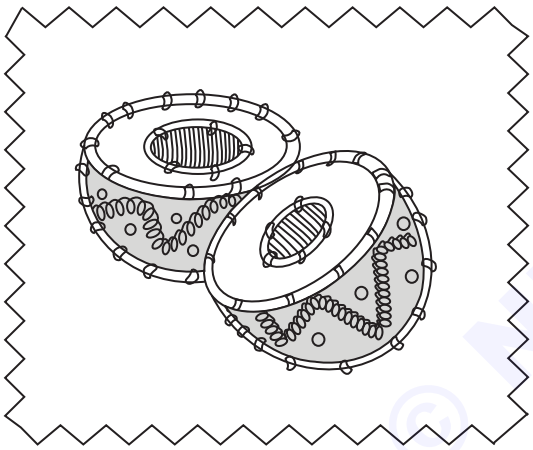
Fig 17



APPLIQUE WITH BLACK WORK

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Fig 18

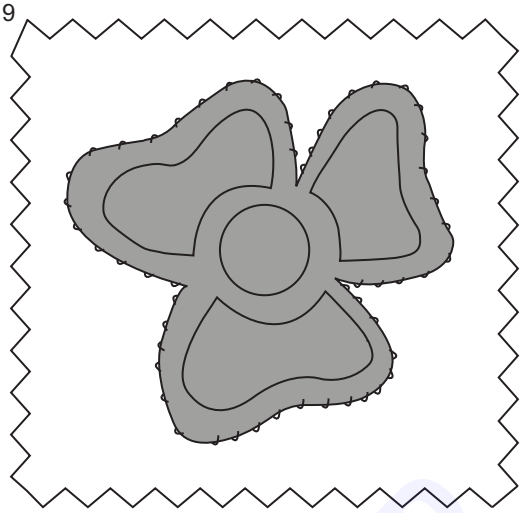


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Italian applique (Fig 19)

Italian applique is a decorative form. Wool (yarn) or cord is pulled through narrow stitched channels to produce thick raised lines on the right side. Traditionally bed covers and clothing such as waistcoats and caps were richly embellished with corded channels. Choose a soft, medium-wave fabric for the backing to pull through the weaves fair easily. Choose a firm sheer fabric such as organdie or organza for the top layer.

Fig 19



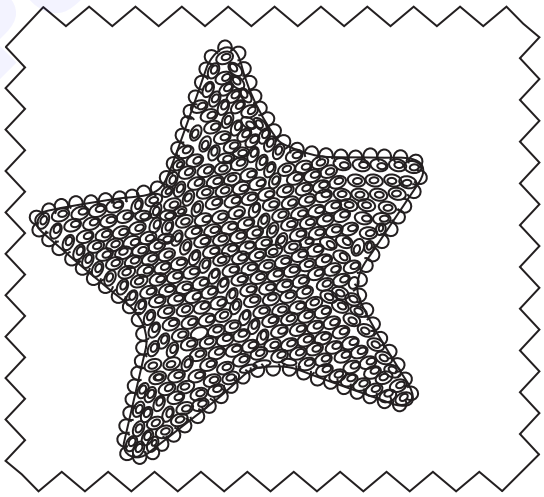
GOLD CORD APPLIQUE

SON17251J

Sequins applique (Fig 20)

Sequins applique gives an embossed effect with glittering appearance. It is an applique with sequins filled design on organza fabric. After filling the sequins, the design is cut away and fixed on to the base fabric using slip stitches. Since it gives glittering effect, it is mostly used for the garments of party wear. It is suitable on articles like wedding dresses, party wear, wall hangings, etc.

Fig 20



SEQUINS APPLIQUE

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Placement of embroidery design

Objective : At the end of this lesson you shall be able to
- **describe about planning makes perfect**
- **explain types of placement**
- **describe about placement of design.**

Planning makes perfect

After selecting a suitable design for embroidery we need to transfer it on to the fabric being embroidered. There are more than a few different ways of marking/tranferring a design on fabric. But before tranferring the design on the the fabric, the knowledge of its correct placement on to the fabric or garment is very essential for every embroiderer. However there are some guidelines for placing designs on everything from bibs to gents shirt and sleepers to hair band. But the correct design placement depends on individual taste. Therefore before placing a design make sure that it looks good on that article or garment or the individual one.

The placement of design is subject to many variables including

- Customer preference
- Style, size and fabric of the garment
- Shape, size and purpose of the design.

Modify the design placement as needed when working with a variety of sizes of garments. Move the design up or down approximately ¼" to ½" moving from one size to another.

Placements tools

To do correct placement of embroider design there are several placements available from variety of sources. Templates are very convenient and accurate tool for positioning.

Hooping devices are also used to aid in the process or hooping goods to be embroidered. These device allows for uniform and efficient hooping placement. Hooping device are also excellent tools that help place design/logo accurately and consistently.

For successful design placement. The planning of every thing according is very important.

When positioning the design on any garment such as children garment, ladies garment, gents garment or linen's the knowledge of different type of setting is very important for every embroiderer before starting the project. Some different types of setting are as follows.

Some types of designs settings

1 **Center:** In this setting the unit is to be placed in the center of bed linen. Table linen and also in garment like ladies kurta, gents kurta, back gents shirt, frock etc.,

2 **Border :** The repetition of the one unit on same distance is called border. Border is to be placed in the bottom or sides. This type of design can be used in both Linens and garment like sari, ladies suits, placket of gents kurta etc.,

3 **Spray:** When one unit is placed on the whole garment in equal distance horizontally and vertically is called spray setting. This type of settings can be used in linen and garment like ladies suits, kurta, sari etc.,

4 **Neck:** When the unit displaced on the right shoulder to slit of left side is called shoulder setting. It is also known as swiring design setting. Generally this type of setting can be used in only ladies garments.

5 **Shoulder :** When the unit is placed on the shoulder centered between placket/middle and arm hole seam is called shoulder setting. This type of setting can be used in ladies kurta, blouse and gents kurta, shirt etc.

Plan and determine the center of the design and mark it with marker.

Types of placement

1 Horizontal placement (Fig 1)

2 Vertical placement (Fig 2)

3 Half drop placement (Fig 3)

4 Diagonal placement (Fig 4)

Fig 1



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Fig 2



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Fig 3



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Fig 4



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Sl.no	Clothing	Placement
1	Polo/Golf Shirts (left chest).	7" - 9" down from left shoulder seam, centered between placket and side seam, or 4" - 6" to the right of placket.
2	T-Shirts (left chest, no pocket)	7" - 9" down from left shoulder seam, between center and side seam, or 4" - 6" to the right of center.
3	T-shirts (left chest, pocket) Centered above or on pocket. Button-down shirts (left chest, no pocket)	Centered above or on pocket. 7" - 9" down from left shoulder seam, centered between placket and side seam, or 4" - 6" to the right of placket.
4	Button-down shirts (left chest, pocket)	Centered above or on pocket.
5	Shirt fronts	Consider size of garment and shape of design. Generally, the top of the design should be 3 1/2 - 4 1/2 inches from garment neck, centered between left and right seams.
6	Shirt backs	5" from collar, centered between right and left seams
7	Jacket backs	7" - 9" down from shoulder seam, centered be two side seams.
8	Robes	4" - 6" down from left shoulder seam, centered between placket and side seam

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9	Hand Towels	2" above hem, or 1 1/2" above border
10	Bath Towels	4" above hem, or 1 1/2" - 2" above border

Frock placement design

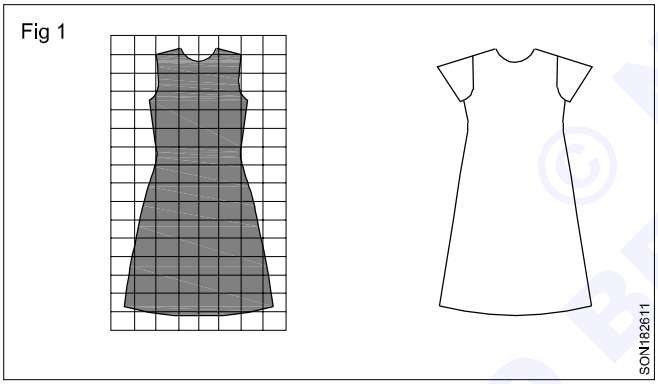
Objective: At the end of this lesson you shall be able to
- **describe the suitable placement of design on frock.**

The frock is a girl's or womens dress. It is an upper body outer garment and loose fitting garment. Frocks can be decorated with different trims like frill, laces and with embroidery.

Frocks are prepared in many ways styles and fashions. The style variations of embroider design on frock. It is greated with modification of components like yoke, sleeve, collar, neck , flair etc.

Frock is stitched with simple features are bodice with dart, gathered skirt part, sleeves, along with or without collars. It is constructed with V, round and square shaped neck, which can be decorated with embroidery using neck setting. Yoke part can be decorated with applique work using center setting. The applique work enhanced the beauty of frock. Sleeve and flair of plain frock can be embroider using border. Setting mark and plan the placement of design. (Fig 1)

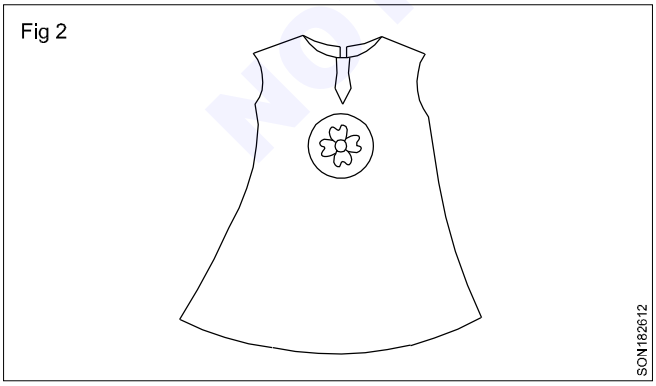
Fig 1



Center setting

This type of design position should be 1"-3" down from the front Neck line and center between the side seam. (Fig 2)

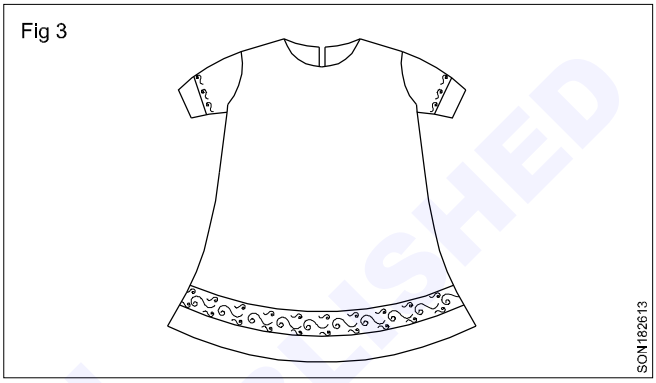
Fig 2



Border setting

This method should be 1" up from the bottom line of the frock and 1" up from sleeves bottom line of frock. (Fig 3)

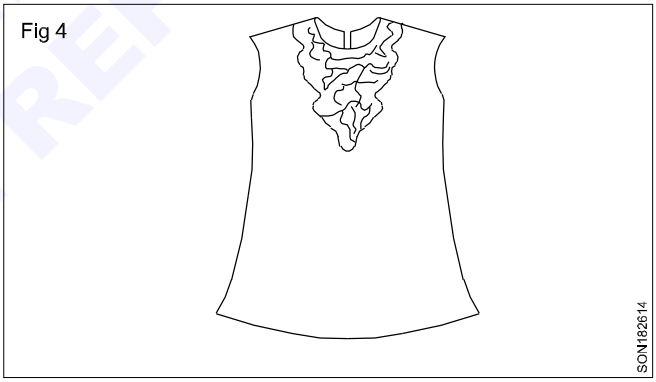
Fig 3



Neck setting

The design should be near the shoulder area along the neckline in the Neck setting. (Fig 4)

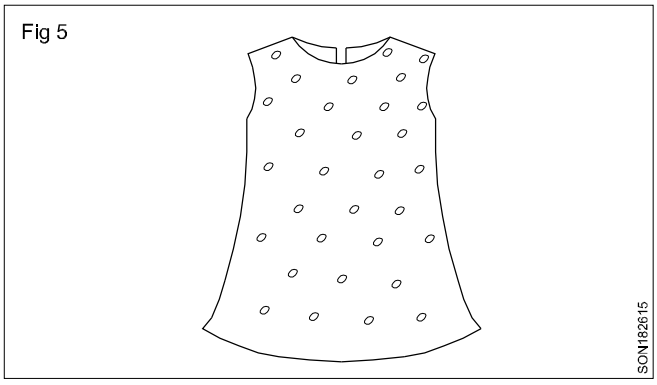
Fig 4



Spray setting

This method of design position should be horizontally and vertically centers on it. (Fig 5)

Fig 5



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Kurta placement design

Objectives: At the end of this lesson you shall be able to
- **describe ladies kurta placement design**
- **describe gents kurta placement design.**

Ladies kurta placement design

It is also known as Kameez. It is a upper body garment. It is a full length and can wear between above knee to the lower calf. This length/design varies with the fusion scenario. It can be fitted as the fashion demands. The styes variations of embroidery design on ladies shirt are created with modification of its component like sleeves, neck, yoke, culf etc.

Ladies shirts are prepared in many styles and fashions

The ladies shirt can be clubbed with a salwar or chuidaar. A long and broad shawl called “Dupatta” is worn along with it. All three components (Salwar, Kameez, Dupatta) should match or complimentation each other in colour or design or both of it.

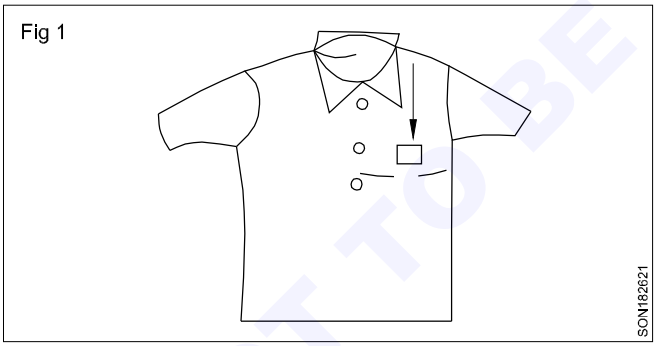
Gents kurta

Design 1 logos are usually placed on the left chest on the gents garment such as Jackets, Shirts, T-Shirts and Kurta etc., because of our traditional hand shoke. We reach a cross our bodies with right hand shake, which covers the right chest area.

Kurta front side

When positioning left chest design on any Shirt, Kurta, T-Shirt logo should be placed 7”-9” down from left shoulder seam and centered between placket and side seam or 3” - 5” from center.

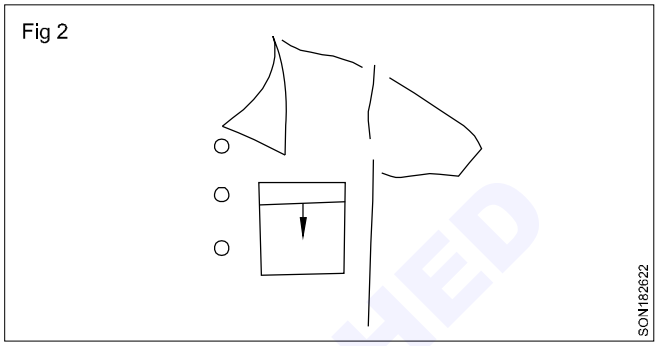
Fig 1



When positioning design on any shirt pocket.

The design should be place on ½” down from top and centered between side seams.

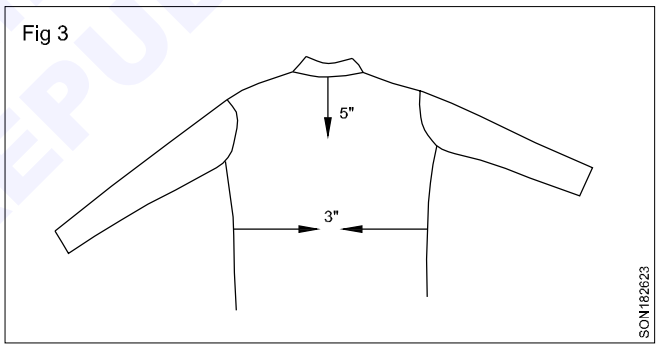
Fig 2



Kurta back side

When positioning design on any shirt and kurta’s Back, The design should be place 5” from collar and 3” for smaller sizes. The design is centered between left and right seams.

Fig 3



Top placement design

Objective: At the end of this lesson you shall be able to
- **explain about top placement design.**

Tops can refer to any upper body garment. The word (tops) most commonly refers to Women’s shirt. Generally, top is a garment with full vertical opening. It can be decorated with embroidery.

Tops are stitched with or without sleeves. It can be enhance/Embelished with different types of setting like spray, center, shoulder, side, Border setting, Beside that setting collar and cuff also can be embroidered.

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Fig 1



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Fig 2



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Fig 3



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Fig 4



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Estimation & costing of Garments

Objectives: At the end of this lesson you shall be able to
- **know about basis of estimation and costing in garments**
- **factors of Estimation and costing.**

Embroidery is also a very important section of the Apparel sector. It's very essential for decorating garments. It makes the garments more attractive to us. It has now become more popular and widely used in the apparel industry. Maximum orders received from buyers, generally exist one or several types of embroidery tasks. There are many factors to calculate the embroidery charge in garments. The main factors affecting to calculation cost of embroidery are given below.

Factors for Cost of Embroidery

When looking to get items custom embroidered a couple of factors to consider are product quality and price, size of the design, and the number of locations being embroidered. Affecting factors are:

- The number of stitches.
- Type of embroidery.
- The time required to complete one batch.
- Color of thread.
- Cutting of appliqué (Dice or Laser cutter).
- Place of embroidery.
- Resource and hand involve in doing embroidery.
- Any restriction on selection on the embroidery machine.
- Any compliance requirement.
- Any restriction on the use of embroidery thread.
- Any lab test requirement.

Calculate of Embroidery Cost in Garments

We know the embroidery stitch unit is 12000 stitches but always embroidery factory will not accept any order on stitches if the total handling time is too long due to the combination of work with Applique, Patch, Wording, etc as such how much time is consumed to complete one batch will dictate the cost.

12000 Stitch = 1 units in embroidery

For computing the price of embroidery we need to know the following information first and consider some parameters:

1 The quantity of stitches in the design.

2 Rate of per unit

1 Stitch the quantity of the design. Say, it is 8000

2 Rate of per unit. (it may vary depends on the design, also the availability of the factory). Say, it is Rs.15/ unit.

At first we will find out the unit per dozen. (Stitch qty X 12/ 12000)

Rules: = (Stitch quantity X 12) / 12000 X Rate per unit

= 8000 X 12 / 12000 X Rs. 15

=96000 / 12000 X Rs. 15

= 8 X Rs. 15

=Rs.120/dozen

Costing of product

Manufacturing cost + Estimated profit= pricing of garments

Factor affecting cost of garment articles

1 Fabric

2 Trimmings

3 Garment Design

4 Surface embellishment

5 Labour Cost

6 Production time

7 Transportation cost

Costing Embroidered Garments

Quality of Raw materials

Certain embroiders such as zaradozi, dabka are expensive because their raw material such as sequins, stones are also expensive

- Silk threads, metallic threads are more expensive then cotton threads

Quality of embroidered Garments

- More the embroidery, more the cost of the final product
- Intricate embroidery work is expensive then embroidery with bigger and fewer ideas
- Use of expensive raw material increase the cost

Nature of embroidery

- Hand embrodiery is expensive then machien embroidery.

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- The cost of simple stitches like chain stitch, stem stitch will be lesser as compared to zardozi, filling stitches like satin, fishbone etc.

Nature of workmanship

- Intricate embroidery needs skilled craftsmanship, more time, patience and more efforts of the worker hence it, increase cost of the product or article.

Customer's specifications

- In case of custom tailoring or boutiques, the specifi cations given by customer's also play a role in the pricing.

Size and placement of design

- The bigger and more the number of embroidery motifs, higher will be the price of the article.
- Smaller and simple designs at one or two places only will cost less.

Evaluating embroidery process

- Embroidery process needs to be monitored and evaluated from time to time.
- This is required to maintain the desired quality and finishing as well as for timely completion of work.
- Manuals should be maintained to carry out all these tasks effectively.

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Accessories used in Aari Embroidery

Objectives: At the end of this lesson you shall be able to
- **describe different varieties of beads**
- **state the importance and different types of sequires**
- **explain the importance of bead work.**

Introduction

Beadwork is the art or craft of attaching beads to accessories or to cloth, usually by the use of a needle and thread or soft, flexible wire. Most beadwork takes the form of jewelry or other personal adornment, and beads are also used in wall hangings and sculpture.

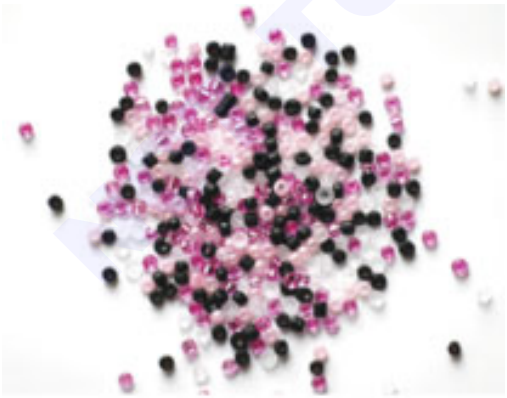
Beadwork techniques are broadly divided into loom and off-loom weaving, stringing, bead embroidery, bead crochet, and bead knitting.

Most cultures have employed beads for personal adornment. Archeological records show that people made and used beads as long as 5,000 years ago. Beads have also been used for religious purposes, as good luck talismans, and as curative agents.

Small glass beads (Fig 1)

A bead is a small, decorative object that is usually pierced for threading or stringing. Beadwork is the art or craft of making things with beads. Beads can be woven together with specialized thread, strung onto thread or soft, flexible wire, or adhered to a surface (e.g. fabric, clay). Beads are divided into several types. Beads can be made of many types of materials. The earliest beads were made of convenient natural materials (i.e., of animal- or plant-based origin). In modern manufacturing, the most common bead materials are wood, plastic, glass, metal, and stone. Beads can also be made from chocolate.

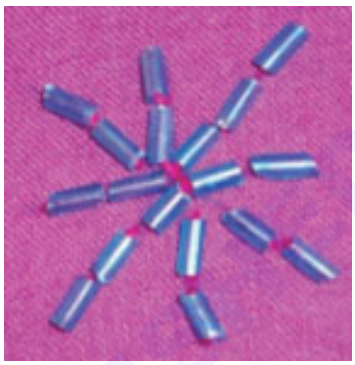
Fig 1



Tube beads (Fig 2)

Tube beads are in tube like appearance, to enhance its beauty. It is also available in different sizes. Most of the garments are decorated with this tube beads.

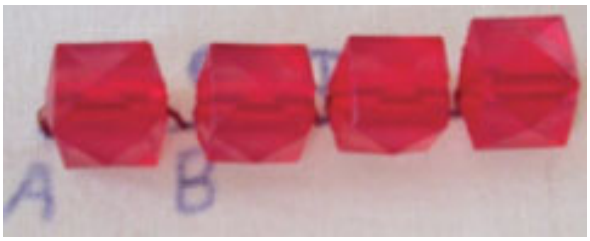
Fig 2



Square glass bead (Fig 3)

Crystal beads are similar to glass beads, which has more cuts and dimension on all over its body. These cuts give the most elegant look to the beads. Crystal beads are also available in different shapes. They are, diamond glass beads (Fig 4), oval crystal beads (Fig 5), etc.,

Fig 3



Diamond glass beads (Fig 4)

Fig 4



Oval crystal beads (Fig 5)

Fig 5



Solid colour beads (Fig 6)

Solid colour beads coated with most good quality colour type. The colour never be faded, even it undergoes several washes. So it has more demand in current markets.

Fig 6



Golden beads (Fig 7)

Golden beads are also available in wide ranges of shapes and sizes. These types of beads are mostly used in party wear garments.

Fig 7



Simple fancy button beads (Fig 8)

Button type beads are since used from 70's century. Still people like these button beads in their garments.

Fig 8



Large fancy button beads (Fig 9)

This type of beads are mostly used in home furnishing like curtains, door toppers, cushion covers, cushion bags, tie backs, etc.,

Fig 9



Floral beads (Fig 10)

Floral beads are carved on its right side, to give a flower like appearance. These types of beads are mostly used in party wears and kids wear.

Fig 10



Importance of bead work

Modern beadwork is often used as a creative hobby to create jewelry, purses, coasters, and dozens of other crafts. Beads are available in many different designs, sizes, colors, and materials, allowing much variation among bead artisans and projects. Simple projects can be created in less than an hour by novice beaders, while complex beadwork may take weeks of meticulous work with specialized tools and equipment.

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Aari Embroidery Mirror & Stone Work

Objectives: At the end of this lesson you shall be able to
- **describe different varieties of beads**
- **state the importance and different types of sequires**
- **explain the importance of bead work.**

Mirrorwork (Fig 1)

This traditional mirror work was put into use in India during the mughal region and from the beginning this embroidery was done using mica. Later this embroidery was enhanced with style and trend by introducing the use of different sizes of mirrors. It is created with a convex curve using the traditional techniques. Now it is manufactured in latest mechanical and electronic methods that provide the classiness. Motifs are of flowers and creepers with rows of mirror.

Silk, Crepe, Chiffon, Super net, Georgette and Cotton have the capability to hold mirror work over them. Mirror work can be used on embroidered, printed, plain sarees, cholies, nighties, churidhars, ghararas, wall hangings, pillow covers, hand bags, clutches, sandals, etc.

Shisha stich is used for studding the fabric with mirror. Shisha means mirror. It is often used on Indian textiles and dresses and gives a rich effect. These are simple long stitches about in eight number that pass over the shisha into the fabric.

Fig 1



Shisha or Mirrorwork (Fig 2)

Pieces of mica were used as the mirrors, but later, people started using thin blown-glass pieces. Mirror which in Hindi means "little glass" made by hand, and used mercury, one can also find them machine made and regularly shaped.. Mirrorwork is very popular for cushion covers and bedcovers, purses and decorative hangings as well as in decorative borders in women's salwar-kameez and sari. 'Mirror embroidery' is a style of embroidery popular in Gujarat. It is called so because of the wide use of mirrors.

It is available with different sizes and shapes in the market. Mirrors are embroidered on fabric with different kinds of stitches.

Fig 2



Introduction to kundan or stone embroidery (Fig 3)

Kundan embroidery on fabrics is highly sought after as the richness it bestows to the fabric is virtually unmatched by anything else. Kundan embroidery is an amalgamation of Zardozi and Kundan work. The basic process used is where after the completing the Zardozi embroidery using Gold and silver threads, gemstones and pearls are studded on to it.

Origin and History

Kundan on fabrics goes back to the Mughal era where it flourished under royal patronage in Rajasthan and Gujarat. Artisans from all over the country converged to Rajasthan to learn and perfect this work just like Zardozi, this work floundered due to the increasingly high costs of Gold and gem stones. It is believed that in the late 19th century, Kundan jewellery and Kundan work on fabric came back into the limelight when artisans started using semi precious stones, pearls and silver along with the modified materials of Zardozi.

Beautiful outfits of Kundan work like designer sarees, lehengas and other Indian dresses are also made by artisans in Rajasthan.

Occasion Dressing

Sarees with Kundan work embroidery often form part of the bridal finery at weddings. Best wedding lehengas or bridal sarees, Kundan forms an essential part of the

Fig 3



embellishments. They are also worn on many formal occasions.

Types of embroidery stones

Diamondstick acrylic stones

Sew on acrylic leaves Turquoise (Fig 4)

Fig 4



Square glass stone 10mm (Fig 5)

Fig 5



Stone (Fig 6)

Fig 6



SON19291B

Round glass stone (Fig 7)

Fig 7



SON19291C

Hawalian ocean color rectangle stone for embroidery (Fig 8)

Fig 8



SON19291D

Sew on acrylic stones amethyst (Fig 9)

Fig 9



SON19291E

Round glass stone (Fig 10)

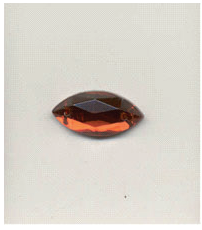
Fig 10



SON19291F

Nevetter glass stone 18 x 18 (Fig 11)

Fig 11



SON19291G

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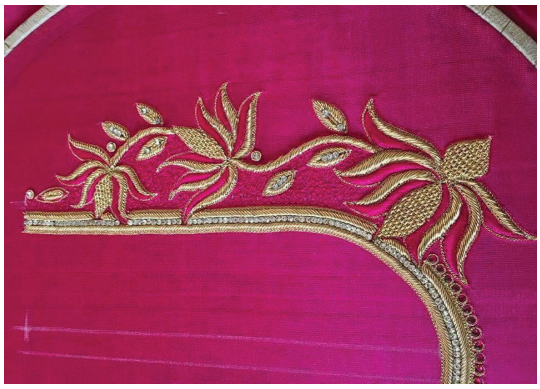
Basic Stitches in Aari Embroidery

Objectives: At the end of this lesson you shall be able to
- **explain the basic stitches in aari embroidery**

Chain Stitch

Aari work is a type of embroidery work that is created by stretching the fabric being used over a wooden frame.A hooked needle is then used to pierce the fabric and produce the embroidery throughout the body of the garment.The kind of stitch that is used to craft the embroidery is a chain stitch, however here the embroidery is created much faster than the traditional chain stitch method, which does not incorporate a wooden frame. (Fig 1)

Fig 1

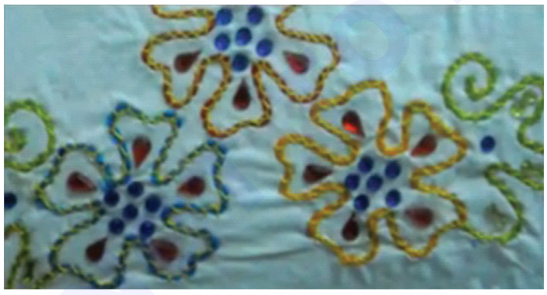


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Cording Stitch

The cord stitch is a rope-like stitch that is made with tightly placed chain stitches.These stitches overlap each other,leaving no ground space.The result is a beautiful braid like texture and is lovely to use on outlines.This stitch is adapted from hand sewing here the cord stitch used to close the fabrics edges.(Fig 2)

Fig 2

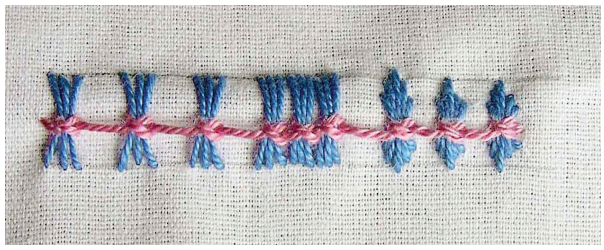


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Butterfly chain stitch & satin stitch

Butterfly chain stitch is a decorative composite stitch that is more versatile that it appears at first. It is easy work in butterfly chain stitch on the curve.Butterfly chain stitch is worked in two ways.It can easily change the colour or type of thread to create an interesting area in hand embroidery. Satin stitch is used to fill flower designs, motifs etc in aari work. (Fig 3&4)

Fig 3



SON192814

Fig 4



SON192815

Blanket stitch

The blanket stitch is a technique used in embroidery and for embroidered lace.It is similar to the button hole stitch. It is called button hole stitch when the stitches are packed closely together and blanket stitch when they are more evenly spaced out.(Fig 5)

Fig 5



SON192816

Zig Zag stitch : Zig Zag stitch is used for decorative purpose. The appearance of the zig zag stitch as a decorative stitch is very close to the satin stitch. Zig zag stitch can be manipulated in order to create different designs.(Fig 6)

Long and short or Filling stitch : Design filled with long and short stitch. Probably used more than any other stitch to fill large areas completely. Here are some tricks to make work easier. After first row of long and short stitches, all stitches will be long and some longer (uneven in length). Avoid too short stitches because they make work look bumpy. Don't leave gaps where fabric shows through but do not pack in too many stitches.(Figs 7)

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Fig 6



Fig 7



Cut work : This is one of the mirror embroidery. This is known as Abhu Bharal mirror work from punjab. Embroidery is prepared with silk thread with chain stitch. The colors used for this embroidery is rich rust, red, light green,pine, indigo surrounds the mirror. This is done on cholies, ghagras.

Motifs are of flowers and creepers with rows of mirror. This is done on table cloth also same color thread or contrast colors also used. (Fig 8)

Fig 8



Metalic thread embroidery

Objective : At the end of this lesson you shall be able to
- **brief explanation about Metalic embroidery thread**

Zardosi has one of the finest traditional embroidery in the world. Zardosi, the traditional art of court embroidery is the sheer magic of nimble fingers and imaginative designs. Metallic wire was traditionally the silverwire coated/plated with gold. Silk threads, beads and stones are also used in zardosi work.Aari work done with metal wire and metal pieces or sequins on velvet, satin and heavy silk bases. Zaridosi is one of the famous and elaborate techniques in metal embroidery.

The original embroidery of zari was done with pure silver wires coated with real gold known as kallabatu. Various color of zardozi thread is used for zardosi work. By bending the zardosi thread, you can make different designs like petals of flower, leave, etc. Lay the thread in slanding position for the decorative borders. This work can be substitution for button knot also.

Gold color and silver color zardosi thread commonly used for any color fabric. Contrast shade of zardosi thread used for the same color light shade fabric. Sarees border pallu are decorated with zardosi work. Aary also useful for semi katori choli, baby frocks, girls wear, etc.(Fig 1)

Fig 1



Metal threads

Metal thread is a thin long wire .Metal thread has been used for a long time to decorate clothing. Metal threads are a little difficult to work. Metal thread comes in gold, copper and silver color. Metal threads are used for designing ethnic wear, sarees and doing detailed embroidery. The most important Metal thread making centers in India are Surat in Gujarat and Varanasi in U.P.

The process starts with the melting stage of metal got to make into bars known as 'paras', which is later drawn to a length by gently beating it after heating. The metal is then

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pulled through perforated steel plates to turn into a long wire after which comes the 'Tarkashi' process.

This is to reduce the wire to the required thinness like a whisp of hair using rubber/ diamond dyes (moulds). The last stage is called ' badla ' when the wire is finally flattened, now done by machines and then wound on silk/ cotton thread which when twisted becomes Kasab/ Kalabatune.

Smaller spangles are called sitara, and tiny dots made of badla are called mukaish. Each strip of metal has a thickness of 19 microns which is only about a third of the diameter of a human hair! You can easily understand that these precious metal threads were extremely expensive. (Fig 2)

Fig 2



Zari threads

Zari is a type of thread made of fine gold or silver wire used in traditional Indian and Pakistani garments. This thread is woven into fabrics, primarily made of silk to create intricate patterns. It is believed demand in varied industries such as textile, fashion and garment.

Zari is the main material in most silk sarees and ghararas. It is also used in other garments made of silk, like skirts, tops etc… Zari (or Jari as traditionally called) is basically a tinsel thread meant for weaving and embroidery.

It is manufactured by winding or wrapping (covering) a flattened metallic strip made from pure gold, silver or slitted metalized polyester film, on a core yarn, usually of pure silk metallic yarn. Zari threads are widely used for creating finer zari works for the embroidered sarees and dress materials.

It is widely known in the market for the fabulous colors and designs. Zari, art this tradition started during the Mughal era. Today, in most fabrics, zari is not made of real gold and silver, but has cotton or polyester yarn at its core, wrapped by golden/silver threads have wide silk, viscose, cotton, nylon, polyester, P.P., mono/multi filament, wire, etc. Nowadays, it can broadly be divided into 3 types. 'real zari' made of pure gold & silver, 'Imitation zari' made of silver electroplated (thinly) copper wire, and metallic zari made of slitted polyester metalized film.

In ancient times, when precious metals were cheaply and easily available, only real zari threads were produced. Due to industrial revolution and invention of electroplating process, Imitation zari came into existence to cut the cost of precious metals.

As copper is the most malleable and ductile metal after Gold and Silver, silver electroplated copper wire replaced pure silver. Various modern colors and chemicals are used to create/impart a golden hue instead of pure Gold.

The precious metals and copper too became dearer due to huge demand in various modern industries. Thus, a cheap and durable alternative was invented with non-tarnishing properties. Mettalic zari came into vogue replacing traditional metals like Gold, Silver and Copper.

This zari is light in weight and more durable than earlier editions. Also, it had the most sought after properties of non-tarnishing and knot-free / knot-less."surat" in the state of Gujarat on the west coast of India is the world's largest producer of all types of zari & zari made-ups namely Threads, Cantile, Laces, Ribbons, Borders, Trims, Fringes, Edges, Cords, neck strings etc...Women from different communities & artisans produce Zari made-ups for weaving, embroidery, crocheting, braiding, etc.(Fig 3)

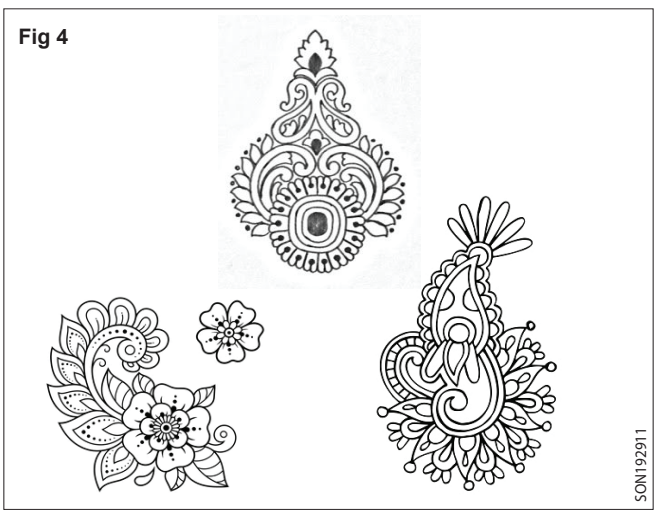
Fig 3



Concept of designing

Person creativity is more important in designing. Embroidery is always the addition of art to a finished fabric, but it is not simply the addition of stitching or color. The use of embroidery on any fabric will help make it more beautiful and more saleable. Successful embroidery products are designed with the strengths of embroidery in mind. The main important concept that should be kept in mind while drawing design for embroidery is that the final output of design will be in a sewn form using thread. The other important factor to be considered is the background of fabric, color thread used for embroidery. The design used in fabric or garment should gel with the wearer or user according to the occasion. (Fig 4)

Fig 4



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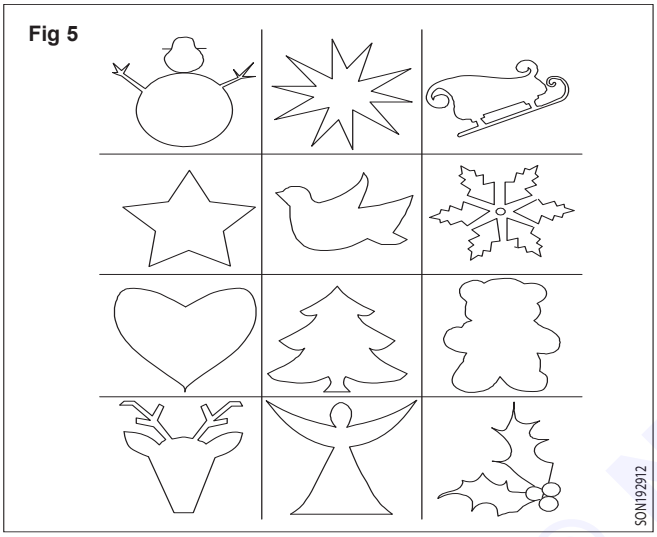
Study of simple motif and compound motif

Motif is a special word used instead of design in fashion world. Motif specially indicates the flower designs used for embroidery. Motif is derived in to two statements simple motif and compound motif.

Simple motifs

Simple motifs are very small designs like single flower, Lines, any simple geometrical design, a tree, single leaf etc., (Fig 2). Simple motif is very helpful for the beginner who starts to learn drawing or embroidery. Embroidering using simple motif helps to learn, embroidery stitches in less time. The learner finishes and learns the stitch in an easy, quick way. Simple motif gives an interest to the person to do their drawing or embroidery. (Fig 5)

Fig 5



Compound motif

Compound motif is the intricate designs used in embroider. The designs are intricate (difficult) line designs, flowers, people, garden, home, etc., (Fig 4) Fashion designers use compound motif to design their garments like sari, salwar, kameez, cushion cover, wall hangings, curtains etc.. Now a days in fashion industry no designs is created without compound motif. The person who develops design using compound motif is the talented person in fashion field. Compound motif with creativity leads to a designer in fashion. (Fig 6)

Fig 6



Laundry of Embroidery Articles

Objective : At the end of this lesson you shall be able to

- **knowledge of laundering of embroidery articles.**

Introduction

Embroidered clothes, accessories, and home furnishings, whether done by hand or machine, feature elaborate stitches made by applying thread on a base fabric which can be cotton, wool, linen, silk, or a synthetic. The threads can be wool, cotton, metallic, silk, or acrylic. As with any embellished piece, care must be taken to preserve the work and time that has been invested.

Test Embroidery Threads for Colorfastness

Almost all clothes and accessories now have care labels that tell how to clean the item. But before to do anything with embroidered clothes or stitched craft pieces, you should check the embroidery fibers for color fastness to prevent dyes from running. Testing is simple. If there are large blocks of color, dampen a piece of white cloth with cold water and gently blot it over each different thread color in the garment or accessory. If there are smaller areas, use a cotton swab. If there is any color transfer to the white cloth or swab, do not wash the garment or item at all because washing will result in discoloration and fading. Head to a professional dry cleaner instead.

Fig 1





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If there is no color transfer and the base fabric is washable, it can be hand washed or machine washed embroidered items on the gentle cycle following the care label guidelines.

Vacuuming and Home Dry Cleaning

If the embroidered outfit or accessory is just looking dull, the first step in cleaning should be vacuuming. Cover the end of the vacuum hose with a piece of nylon stocking or light mesh. Starting on the front of the piece, vacuum slowly by keeping the nozzle just above the piece. If the embroidered item is a pillow with an insert, turn the embroidery cover inside out and repeat the process on the backside of the piece. This may be enough to brighten the item and give it the look you want.

If the garment or accessory is still dirty or has strong odours, it need to be clean it. If the piece is vintage, has great monetary, or sentimental value, consider consulting with a professional textile conservator. The local art museum should be able to recommend one.

If the embroidered item is not heavily soiled and just needs some freshening, consider using a home dry cleaning kit. Be sure its done the colorfast test and then follow the instructions with the kit. The embroidered garment, pillow, or wall-hanging will be freshened and should need nothing more than a light pressing.

Hand Washing

First, pretreat visible stains following the specific recommendations for the type of stain. Allow the stain remover to work for at least 10 minutes prior to hand washing. If the background fabric is dull and needs to be brightened or whitened, choose an oxygen-based bleach like OxiClean, never chlorine bleach. Follow the package instructions and allow the piece to soak for at least four hours for best results.

To hand-wash colorfast embroidered clothes or decorative pieces, fill a deep, laundry sink with cold water. It is best to use cool water to prevent dye bleeding. Be certain that the sink is very clean and has no residue from cleaning agents that could cause damage to the piece. Use a gentle liquid detergent that will disperse in the water and leave less residue on the fabric.

Place your garment in the water, being certain that the entire piece gets wet. Gently move the garment around in the water. Do not twist or wring the fabric. Allow the piece to remain in the water for about 10 minutes. Next, drain the wash water and fill the sink again with fresh water. Repeat draining and refilling the sink until the water and piece are soap-free.

If washing a hand-embroidered home accessory, take time to ensure that the entire piece is stable. Before to begin, measure the completed area. Remove the embroidered fabric from the pillow, footstool, or backing. If the edges have not been finished, it need to be tape or sew the edges to keep the piece from unraveling.

Drying and Pressing

After hand washing embroidered pieces, gently squeeze out the excess water. Roll the piece in a towel and squeeze gently to remove as much moisture as possible. Place the item on a dry towel and allow to dry flat.

If the garment or item needs pressing, always iron on the wrong side. To prevent flattening the shape and design, put a thick, soft terry towel (preferably white to avoid color transfer) on the ironing board under the garment.

If it is must, for some reason, iron on the right side of the embroidery; always use a pressing cloth between the iron and the embroidery. This will prevent tearing of threads, possible melting of threads which creates a shine on the fabric.

Fig 2





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Stains and it's treatments

Objective : At the end of this lesson you shall be able to
- **explain the different kinds of stain**
- **explain its cleaning agents**

Importance of stain removal

Stains are the important demerit that spoils the quality of any fabric. Stain removal is an unavoidable process to make a fabric or garment usable. The stain caused on a fabric reduces its quality as well as use ability. The fabric stains may cause due to various reasons. As well as the stain types and its severity also differs with every fabric. Fabric stains may be caused by ice cream, milk, pencil, mud, rust, grease, ink, fruits, adhesives, glue or stickers and many others. Every stain removal method will give a best result. Dry and wet stains are the two main categories available in every stain type. It can be easily removed when the stain is wet, where as the removal procedure becomes tideous when it gets dry.

The following are the important points to be remember for stain removal

1 Treat the stain as quicker as possible for better result.

2 Avoid the usage of hot water for treatment of stain, as it will set the stain.

3 Approach the stain gently as harder treatment will spread the stain further.

4 Work inwards towards the centre of the stain to remove it easily.

5 Place a clean white towel under the embroidery before sorting to prevent the fabric from picking up further stains from anything underneath it.

6 Test the fabric for colour fastness before embroidery by rubbing a wet cotton bud over a small test sample of the fabric.

Classification of stains		
1	Oily stains	Butter, ghee, oil etc.
2	Animal stains	Egg, blood, milk, meat etc.
3	Vegetable stains	Tea, Cocoa, Coffee, fruits, honey, Chocolate, etc.
4	Mineral stains	Rust, medicines, ink etc.
5	Cosmetic stain	Lipstick, nail polish, scent
6	Dye & paint stain	Alkaline or aciditic properties
7	Burn stain	These stains are usually impressed by heating.
8	Grass stain	Contains alkaline substance.
9	Sweat	Removable by soap solution and pure water.

S.No	Stain	Treatments
1	Butter, ghee, oil, grease stains	• Make powder of white chalk, put stained spot on a blotting paper and pour this powder on it and then after a while, clean it by brush. This process should be repeated for two or three times. • Put blotting paper above and under the stained spot and press it by hot iron. When the oily effect of the stains alights on the blotting paper, change the blotting paper. • If the stains are not removed, sprinkle tetrachloride on the stained spot and clear it by petrol
2	Paint, varnish stains	• Use kerosene oil to remove a fresh stain. • In case of a old stain, use solution of turpentine oil and methylated spirit
3	Egg stains	• Pour salt on the stained spot and then spray a stream of water on it. • On woollen garment, apply tartar powder. On removal of stain put a wet cloth on it and press.
4	Milk stains	• Use soap and cold water. Fresh stain is removed by this. • If stain is old, bleach it in chlorine, stain shall be removed.
5	Blood stains	• Stained spot should be dipped into salt water. After a while clean it by rubbing. • Make solution of ammonia and water and wash the stained spot by it. • Smear starch paste on woollen garment and get it dried and remove the stain by brush. If stain is not removed, the operation should be repeated.
6	Tea, coffee stains	• Pour a blade of boiling water on the stain • This stain is also removable by using salt and lemon. • Light solution of sodium perborate and hydrogen is also poured on the stain.

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7	Fruit and honey stains	• Wash with soap and cold water. Then pour water blade on the stain from one foot height. • Smear lemon juice on the stain and get it dried in the sun then bleach . • Give hydrogen steam on the stain, it shall be removed.
8	Rust stains	• Give water steam to the stained spot and wash it. • Rub lemon juice on it. • Spread the stained spot in a plate. Make a oxalic acid sack dip it into water and put on the stain. Don't let the spot dry. This should be done in open sun. The process may be continued till the stain is removed. Mix one teaspoonful oxalic acid into three big spoons of hot water • Apply turpentine oil on woollen and silk garments. Clean the spot after a while. For removing the smell of turpentine oil the garment should be dried on open sun.
9	Ink stains	• Absorb the wet stain into blotting paper. Then wash it by soap and cold water. Put it into curd for half an hour. Take care curd does not dry. Immediately then again wash the stain by soap and cold water. • Dip the stained spot into light ammonia solution. Then wash it by water. • Woollen and silk garments should not be rubbed too much, therefore stains on then should be removed by applying equal amounts of hydrogen peroxide and ammonia on them. • In cotton cloth, stains of this type are also removed by applying unripe tomato juice.
10	Medicine stains	• It is removed by using of hot water and soap • Old stains are removed by dipping it into the solution of methyl alcohol and surgical spirit • Clean delicate and woollen garments by methyl spirit only
11	Grass stains	• Use hot water and soap. Then spray hydrogen peroxide. • Dip the stained spot into the solution of ammonia and water. After a while wash it by cold water and soap. • Use methyl spirit on woollen and silk garments • These stains are also removed by kerosene oil and alcohol. It is spread in the open sun to remove the small of kerosene and alcohol.
12	Scent stains	• At times scent stains are also caused on the garment due to some mistakes. For this use methyl spirit. Smear it on the stain and keep open for a while. When the stain is removed, wash it by soap and water.
13	Burn stains	• Application of hydrogen peroxide on the stain shall also remove it. • Its stains are also removed by washing it in the ammonia acid.
14	Lipstick stains	• These stains are removed by methylated spirit. When the stains are removed, wash the garment by soap and water.
15	Nail polish stains	• Nail polish stains are removed by acetone. • Old stains are also removed by applying sodium hydrogen sulphate bleaches.
16	Boot polish stains	• This stain is removed by using methyl spirit. • This stain is also removed by using turpentine oil and petrol.
	Stain	**Treatments**
17	Machine oil stains	• Stains on woollen and silk garments is removed by oil and petrol and dried in the sun. • In case of a cotton garment, the stain is dipped into a solution of ammonia or carboric acid. Then it is properly washed by cold water.
18	Wine stains	• First wash it by cold water only. Then apply salted water or boric acid on it to remove the stain. • Apply hydrogen steams on woollen garments. The stains shall easily be removed.

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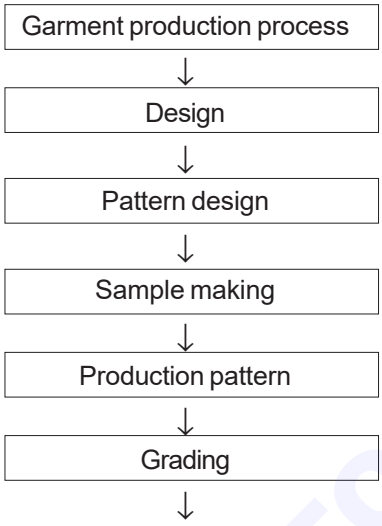
Quality Control & its Requirements

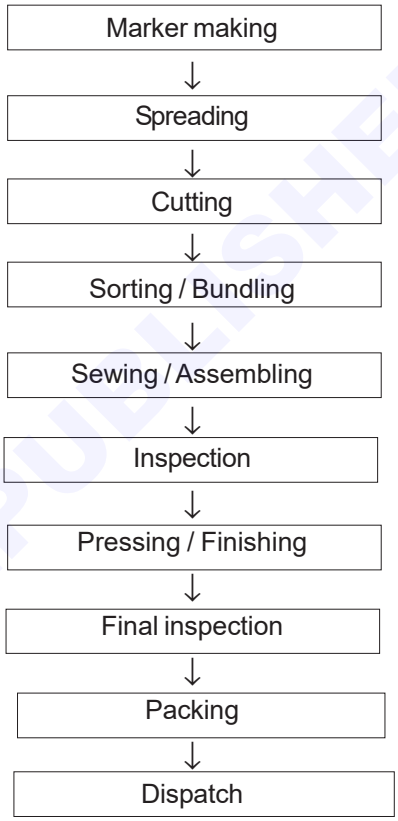
Objectives: At the end of this lesson you shall be able to
- **explain garment production process**
- **state introduction to quality control**
- **explain raw material quality control**
- **explain fabric quality control**
- **explain defects classification**
- **explain about fabric care.**

Introduction to garment industry

Garment industry processing depends on steps and techniques. Outfit developing techniques means the clothing running actions and methods for the huge creation in company time frame for company reason. Garment plants based on items. Garment factor are classified into

1. Woven garment factory
2. Knit garment factory
3. Sweater garment factory





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Introduction to quality controls and its requirement

Objective: At the end of this lesson you shall be able to
- **explain about fabric care.**

Introduction

Quality control

In the apparel industry where fashion dictates the market place and there is a multitude of variables in terms of raw materials manufacturing processes, operators and so on, the importance of quality is not universally recognised. But the success of garment made mainly depends on quality (Quality is the main ingredient in a product that delights the customer by either meeting or exceeding expectations.)

A survey conducted by experts reveals the following two findings such as directly related to quality

1 Eighty seven percent of consumers always look for top quality.

2 Eighty four percent of consumers will pay more for top quality.

Various research studies have indicated the following six benefits of quality.

- Greater market share
- Higher growth rate

- Higher earnings
- Premium price
- Royal customers
- Highly motivated employees.

Quality means different things to different people, depending on their perception of the value of a product under consideration and their expectations of performance and durability for that product. Quality is defined as essential nature; a trait; characteristic; superiority; relatively considered. Quality can also mean any of the following.

- The degree of excellence that an item possesses
- Being the best money can be buy
- Meeting a specification
- Craftsmanship
- No more than 1% defective lot
- Anything Japanese

There are eight dimensions of quality, performance, features reliability, conformance, durability, serviceability, aesthetics and perceived quality. Quality doesn't become complete without any one of these dimensions.

Quality can also be defined as a combination of the characteristics of properties of a product which make the product usable. Therefore, the quality of a product may be described in terms of whether the product is fit for use or not. Fitness for use is the most widely used concept of quality and is determined by those features of a product that a user can recognise as beneficial, that is, the fresh baked taste of bread, clear reception of radio, programs, timeliness of busy train etc., wear life of a pair of shoes; fitting of a garment and so on. Fitness for use should be judged from the consumer's point of view and not from either the manufacturer's or seller's perspective.

A garment can be decided whether a quality one or not by the following guide lines.

Some quality relates terminology taken from an American National Standard "ANSI/ASQC A3 Quality Systems Terminology" published by the American society for quality.

Quality management: That aspect of the overall management function that determines and implements the quality policy.

Quality system: The organizational structure, responsibilities, procedures, processes, and resources for implementing quality management.

Quality plan: A document setting out the specific quality practices, resources, and activities relevant to a particular product, service, contract, or project.

Quality policy: The overall intentions and directions of an organization as regards quality as formally expressed by top management.

Quality assurance: All those planned or systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality.

Quality control: The operational techniques and the activities used to fulfil requirements of quality.

Statistical quality control: The application of statistical techniques to the control of quality.

Inspection: Activities, such as measuring, examining, testing, gauging, one or more characteristics of a product or service, and comparing these with specified requirements to determine conformity.

Testing: A means of determining the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating actions and conditions.

Some of the factors that influence consumers' perception of quality. These factors are:

Price: Consumers tend to associate quality with higher price. There is some evidence that price is used by shoppers in quality estimates and that for some products consumers' estimates of quality are affected by price.

Technology: This indicates factors such as fabric and seam strength, colour fastness, shrinkage, and other properties that are affected by the state of technology in the industry.

Psychology: A garment can be reasonably priced and the best that technology can offer, but if it is not attractive in appearance, if it is not fashionable, if it does not meet the aesthetic requirements of the customers, then it is not attractive in appearance.

Time orientation: This includes durability. Of course, the importance of durability varies with categories of garments, that is, children's garments are expected to be more durable than ladies' high fashion garments.

Contractual: This refers to a product guarantee, the refund policy of a store, etc.

Ethical: This refers to honesty of advertising, courtesy of sales personnel, etc.

Quality garment

1 It must be free from defect, such as stains, material (fabric) defect, open seams, loose hanging (untrimmed thread, misaligned buttons and button holes, defective zippers, and so on).

2 Must fit properly for the label sized.

3 It must perform satisfactorily in normal use, meaning that a garment must be able to withstand normal laundering / dry cleaning / pressing cycled without colour loss or shrinkage, seams must not come apart, fabric must not year, and so on)

Quality Control

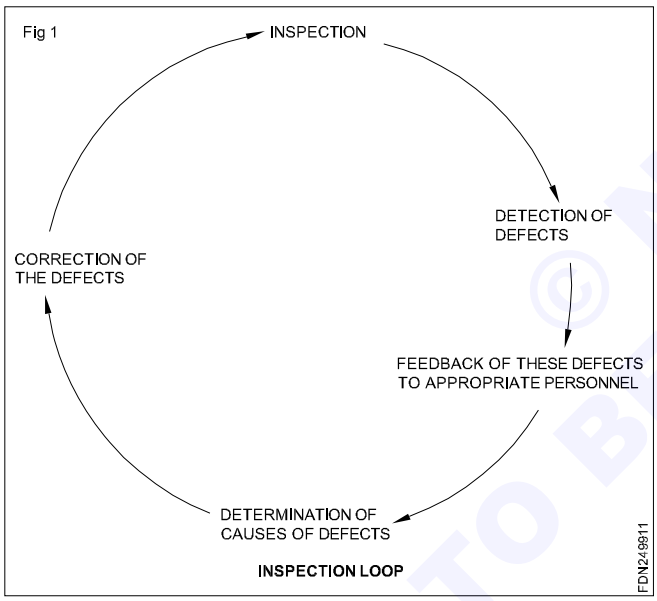
Quality Control is the process of maintaining given standards in the product, from the design phase to the customer's use of the product for a give life with given conditions. The American Society for Quality control (ASQC) defines quality control as a systematic approach to the search for excellence (synonyms : productivity, cost

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reduction, scheduled performance sales customer satisfaction, team work, the bottom line).

Inspection is the mai means by which quality control is achieved through. Inspection can be defined as the visual examination or review of raw materials (such as fabric, buttons, zippers, sewing threads, etc). partially finished components of the garments and completely finished garments in relation to some standards, specifications, or requirements, as well as measuring the garments to check if they meet the required measurements.

(Quality control is not just finding out the defects but also includes rectifying the faults and preventing its recurrence in future. The principle involved in quality control is the early detection of defects, feedback of this information to appropriate people, and determination of the cause, ultimately resulting in the correction of the problem. The main objective of inspection as the detection of defects and non conformance as early as possible in the manufacturing process so that time and money are not wasted later on in either correcting the defect or writing off defective garments. For inspection to be effective, the entire quality control cycle shown in the following figure must be completed. (Fig 1)



Most of the quality problem can be reduced once there is a clear understanding between the buyer and the supplier. Since the garment industry is the fashion oriented industry the buyer keeps on changing his specifications. A close follow up and updating of the information and effective communication to the shop floor is most essential to meet the exact requirements. In an average Indian setup, the breakup of the quality problems goes as follows.

Sewing faults	75%
Fabric faults	14%
Finishing faults	10%
Trims and Thread faults	1%

The major percentage of the claims by the consumers has been directed towards bad quality of garments due to simple sewing mistakes.

Management and the quality control department provide production workers with assistance information and support in their efforts to produce garments which confirms to specifications. But quality in production can be controlled only by the production workers as they make the product.

Quality control in a garment industry can be divided into three sections.

Raw material quality control

In - process quality control

Final quality control (or) Finished Product Quality Control

2 Raw material quality control

Quality control is a must for raw material, which not only governs, aesthetics, durability, and utility but also governs the cost of processing, packing, and / or shipping, because if a garment is manufactured with a defective raw material this will result in not only material waste but also labour, power and time etc which were utilised to manufacture that garment. Quality control of incoming raw material (i.e fabric, sewing thread, zipper, interlining etc) should begin as soon as the material is received.

The first step in raw material quality control is the establishment of raw material quality standards for fabrics, interlinings, thread, zippers, closures and other findings. Even labels and tags need to conform to quality standards. Although fabric account for more than 90% of the cost of all materials, each component, however seemingly in significant, requires control of quality to avoid problems which may result in large number so dissatisfied customers. A broken zipper renders a garment useless even though its cost may be a dime. Poor thread can result in skipped stitches and excessive pucker, along with many other problems. Trim items may bleed on to the base fabric if colour fastness is not specified and controlled.

Importance of fabric quality control

1 If the fabric having full of defects and faults, as a raw material it will affect the total production.

2 The defective fabric leads to most of rejected garments and that leads to rejection of the order.

3 Defective fabric defects affect the production and quality, which consumes more time for production.

4 Defective fabrics affect all the process from cutting to packing.

5 Future orders will be spoiled by the more fabric defects.

Quality control in spreading

1 Check whether the lay is compact and without wrinkles.

2 Line matching of the lay should be inspected.

3 Check the number of pattern pieces, sizes and pattern directions of the layout.

4 Check the pattern grain and fabric grain quality.

5 Check the marking quality.

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Quality control in cutting

1 The cut component should be properly matched with the actual patterns.
2 The cutting parts should not have serrated or frayed edges.
3 Check the parts are correct without any over or under cut.
4 Check the portions of the notches and drills.
5 Check the fabric grain of the cuts.

Quality control in sewing

1 Check the garments having proper measure with specifications.
2 Check the garments have defects free. These should not have a sewing defects (miss stitch, puckering etc.) b. Seaming defects (Raw edges inside closing, puckering in seams, etc.) c. Assembly defects (Collar middle variation, sleeve up and down etc.)
3 Check the fasteners, trims, labels and their position and placement.
4 Check the garments frequently at the primary, middle and final stage of the sewing process.
5 Check the quality of stitches, SPI and other details like embroidery works, decorations if any.

Quality control in finishing

1 Check the quality of pressing and the garments should be wrinkle free.
2 Check the garments are trimmed well without any protruding threads.
3 Check the garments are free from stains.
4 Check the quality and position of the individual piece packing materials.
5 Check the folding quality of the garment.

Final inspection

Final inspection process

1 Check the quality of the cartons and presentations. Check the type and method of packing.
2 Check the quality of the presentation and trimmings.
3 Check the measurements of the garments.
4 Check the garments free from raw material defects and sewing defects.
5 Check the appearance and drape of the garments.

Different techniques or methods of final inspection

The main purpose of inspection is to decide whether the garment lot is to be passed or rejected. An out of the total bulk quantity of garments, we cannot decide that how many garments to be inspected. The following are the different techniques.

a No inspection

No inspection means the lot is passed without inspecting even a single piece of garment. If it is a defective lot, it will create the buyers' and customers' dissatisfaction.

b 100% inspection

100% inspection means each and every garment of the lot is thoroughly checked. It is the best method but it will consume more time.

c Spot checking

This method consists of inspecting random shipments. In this method, the lots are checked randomly without any idea. By this, there is a chance or stopping some defective materials and it is only partially effective.

d Arbitrary sampling

In this method, some part of the shipment (normally 10%) is thoroughly checked and decided whether the lot is passed or rejected. But this, percentage (10%) not suits for all the orders. Sometimes, it leads to wrong decision.

e Acceptance sampling/Statistical sampling

This method is also called as "Statistical Quality Control" (SQC). The application of statistical techniques to control the quality is known as "statistical Quality Control". It is mainly based on the AQL preferred by the buyer. AQL is known as Accepted Quality Level is maximum percentage of defective accepted by the customer or buyer.

In this method, statistics or norms are set according to the order quality. An example for set norms has been given below.

Sl. No.	Order Quantity	No. of pieces to be inspected	Defects - Major/Minor
1	1 - 50 Nos.	10	No defect
2	50 - 100 Nos.	15	1 minor
3.	100 - 500 Nos.	35	1 Major / 2 Minors

By these norms, the lot is passed or rejected. But these norms will vary according to the buyers and company. This is a suitable and widely used method and based on the AQL % of the buyers.

Managing quality in the apparel industry

There are various fabric inspection systems, as listed below. However, we will discuss only the 4-point system because it is used most widely:

1 4-point system

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2 10-point system

3 Graniteville "78" system

4 Dallas system

5 Textile distributors institute (National federation of textiles-1955) system

6 4-point System-Revised

4-point system

The 4-point system also called the American Apparel Manufacturers Association(AAMA) point-grading system for determining fabric quality, is widely used by producers of apparel fabrics and by the quality, is widely used by producers of apparel fabrics and by the Department of Defense in the United States and is endorsed by the AAMA as well as the American Society for Quality Control(ASQC).

Fabric flaws or defects are assigned point values based on the following:

Length of defect in fabric, either length or width points

Fabric inspection

1 In garment industries, the quality of received fabric is found out by fabric checking.

2 For that, they are using fabric inspection machine to check the fabric.

Fabric inspection machine

a This machine is used to inspect the fabric quality.

b Here, the fabric is unwound from a beam and being wound on other beam.

c In the middle, the fabric is moved on a glass table which is having a series of tube lights.

d With the help of the brightness, one can visually check the fabric and can mark the defects by placing necessary colour or arrow stickers.

e A counter is also used to know the number meters been checked or wound the fabric winding roller.

3 They are normally following 4 point system to value the fabric either to be passed or rejected.

4 The defects are classified to major defects, minor defects and damages. According to that they are deciding the fabric to be passed or rejected.

5 They use different colour stickers to know the types of fault or defects like major, minor, damages or stain for easy identification.

Point system

In this system, according to the length of the defect the points are allotted. They are,

Defects

upto 3”	-	1 point
upto 3” - 6”	-	2 points
6” - 9”	-	3 points
Over 9”	-	4 points

Holes and openings

1” or less	-	2 points
Over 1”	-	4 points

Here total defects/100 Sq.yards is calculated and normally those fabric rolls contain more than 40 points per 100 Sq.yards are considered as “Rejected”. By this system, the checked fabric is passed or rejected. This is the widely followed system in garment industries. This is suitable for knitted fabrics also.

Common fabric defects

1 **Weft bar :** Weft bar is a band running weft-wise across the full width of the cloth.

2 **Weft crack:** It is thin place or missing weft across the body of the fabric.

3 **Thick and thin places:** These are similar to weft bar bt unlike weft bar it repeats at intervals.

4 **Weft loops :** When a small portion of weft is caught by warp threads and that portion of the weft forms loops. This is seen on one or both sides of the cloth.

5 **Box marks :** Box marks are seen on the cloth as a result of something brushing or staining the weft while it is in or near the box.

6 **Missing ends :** Absence of warp ends at this proper place in fabric is termed as missing end.

7 **Floats:** Improper interlacement of warp and weft ends in the fabric over a certain area is known as float.

8 **Broken picks/double picks :** The partial pick inserted in the fabric because of weft break/exhaustion is called as broken pick.

9 **Lashing-in :** It is the length of weft yarn that has been pulled mistakenly into the shed during weaving.

10 **Temple marks :** These are in fabric because of the incorrect setting of the temple rollers.

Fabric defects classifications

Fabric defects are generally classified as either major or minor. The definition of exactly what constitutes a major defect and minor defect depends upon the type of fabric and the end use, as well as whether the fabric is being graded in the grey or finished state for example, a defect that would be considered as serious (a major defect) in a high quality combed poplin would most likely not be classified on the same way in a low - quality carded print cloth.

Defective fabric classification is done in many industries using the following principles.

Sub minor : A defect which is not obvious and may not be noticeable at first glance. It would not likely cause a garment to be defective to such an extent that the garment would have to be sold as a second. No grading points would be assigned to these defects but if they occur with a high frequency, this fact should be called to the attention of the supplier. If an excessive number of this type defect

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occurs in a single piece of fabric consideration should be given to grading the entire lot as seconds.

Minor : A fairly obvious defect which is noticeable more or less at first glance and might easily cause a defective garment. Points will be assigned to such defects, depending upon length.

Major : An obvious or very obvious defect which can easily be seen from a considered distance and would most likely cause a defective garment.

Critical Defect : This is a classification used for defects of such severity that would cause a garment not to be saleable even as a second.

Weft slubs and warp slubs are probably the most common of all defects, especially in the lighter weight garment fabrics, and in some cases amount to fifty - percent of the defects in a piece. Following closely behind slubs in frequency of occurrence and importance are holes, broken picks, jerked -in filling, coarse picks, thick and thin places, and broken selvedges. The finishing defects which appear with the highest frequency are over bleaching, stains, streaks, dye specks, over dyeing, over or under shrinkage, creases, selvedge to selvedge shading and end to end shading. Common defects for fabrics woven from filament yarns would include faults such as mixed yarn, shiners, twist variation, broken filaments, barr, and reed marks.

Fabric defect description

Defect	Description
Bad selvedge	Wrong draw in selvedge; selvedge damaged by template
Broken picks	Separation of picks of cloth
Broken warp ends	Long ends loose on face of (or) loose ends fabric
Double ends	Two ends weaving as one
Draw backs	Tight warp ends
Filling hanging	Loose ends hanging from left hand side of cloth.
Floats	Misweaves of warp or filling or both, with ends floating usually ½" to 2" square.
Holes	Cuts or tears through fabric
Mispicks	Two picks in same shade for the entire width of fabric
Mixed filling	Wrong count of weft in cloth
Oily filling	Weft with oil spots
Stack thread	Warp end running in loosely
Thick pick	More density of weft than desired in certain area
Warp end cut	Thread not weaving in cloth for 3" or more

Defect	Description
Wrong pattern	Weaving designs are not uni form and correct
Uneven repeat	The repeat size in checks de sign uneven
Clip marks/Pin marks	Fabric slightly distorted or prominent holes near selvedges
Dye stains	Thick colour spots in dyed fabric
Dye streak	Colour concentrated as a bar
Selvedge mark	Different shade along the fab ric selvedge due to folded or doubled selvedge
Uneven dyeing	Variation in shade in lengthwise or widthwise
Uneven brushing	The brushing intensity difference in the fabric
Unbrushed spot	Unbrushed spots caused due to folding of fabric
Shade bar (or Barr'e)	Horizontal band of a different shade running across the fabric
Colour patch	Uncontrolled flow of colour on fabric in printing
Mispattern	The printing not exactly over the other in multi colour printing.

Cutting defects are

Cutting quality is a prerequisite for quality in a finished product. In addition, cut work quality affects the ease and cost with which construction is accomplished. The quality of work leaving the cutting room is determined by how true the cut fabric parts are to the pattern; how smooth or rough the cut surface is; material or fabric defects in the cut fabric parts; shade differences between cut fabric pieces within the bundle.

In addition, various factors in cutting that can affect the subsequent quality should be checked, such as under- or overcut, size, placement and sequence alignment of notches and drill holes, ripped or pulled yarns, etc. Dunlap lists the following defects that may arise in cutting.

Frayed edges: May impede cutting time by clogging the knife action and/or mar the fabric with rips or pulled yarns. The amount of fraying depends on fabric construction and finish. Improper cutting tools or dull knives cause excessive fraying in a pattern as the section is cut.

Fuzzy, ragged, or serrated edges: The result of poor cutting implements. Such edges will impede sewing and/or diminish sewing quality. Such a condition is caused by faulty knife edges such as burrs, chips, or dullness.

Ply-to-ply fusion: More common and troublesome. Adjacent plies in a block are fused together, which makes it difficult for the sewing machine operator to pick up a single ply quickly. Fusion occurs due to heat created by

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excessively high speed of cutting or by the friction of a dull knife. To prevent fusion, check knife speed, keep knives sharp, place wax paper between fabric plies, and lubricate cutting blade.

Single-edge fusion: Consists of single ply whose cut yarn ends are fused to form a hard brittle rim on the cut edge. Sometime, this is desirable to prevent fraying; however, hardness and brittleness are undesirable if they impede sewing manipulation or may result in seams uncomfortable to the consumer.

Pattern precision: Misshape or distortion of the pattern perimeter as cut. Whether it is under- or overcut is due to the poor manual control of the cutting machine and poor lines on the marker. To assure precision in a pattern, check markers before cutting, use tensionless spreading, or allow time for the fabric to relax. After a cut, check the top, bottom and middle plies against the pattern.

Notches: Notch size refers to the depth of a notch. If the depth is too great, the notch may show after a garment is sewn. If the notches are too small, sewing operators may have difficulty locating them quickly, resulting in decreased efficiency. Misplacement of a notch may be due to an improper spread marker, poor control of a cutting machine with the cutter's notching tool stroking diagonally instead of vertically, incorrect marker in that the notches for mating parts do not coincide. Check notch placement against mating piece. Quality control in stitching may be a problem if notches are not aligned.

Drilling: The drill hole may be too large or too small in diameter. In addition, a drill may become too hot due to high speed or wrong size, causing the plies to fuse together at the drill hole. The drill must stroke vertically to the table for uniform placement throughout the bundle. Sometimes fabric properties are such that the slight movement of yarns in a fabric would close a drill hole. In such cases, it is necessary to drill holes with a marking fluid. The drill used for such a purpose is hollow and carries marking fluid(ink) that is deposited at the drill point on the fabric as the needle is withdrawn. Such marks should last long enough so that further processing can be finished without difficulty, but should be easily removable after processing or in case of an error.

Fabric care

Care of fabric is very essential for improving the life and service of a fabric. Fabric care means maintaining fabrics properly clothes need

1 Frequent laundering and cleaning to remove dirt, stairs etc. Its better to wash in lukewarm water with a mild detergent.

2 After washing it should be dried properly. Drying should not be done under direct such as it can fade the colour as well as affect the fiber.

3 Regular ironing should be given to maintain the fabric as well as to get a fresh look.

4 Mending should be done on proper time as the torn fabrics will reduce durability of fabric. As the saying goes "A stitch in time save nine", has to be correctly followed.

5 Stains if any present has to be removed by proper method or dry cleaning.

6 Proper methods of storage should be done for these clothes which we do not use regularly.

7 Washing, Ironing, drying, storing etc should be according to the care label instructions attached to the garment. If we do the above things properly the appearance, feel of fabric will be fresh and durability of fabrics will be high.

Storage of fabrics

1 While washing, see that its cleaned thoroughly to avoid dirt, stains etc and dried well if drying is not proper, it attracts the growth of figures insects which attacks the clothes and destroy it.

2 Do not store in plastic bags or air tight containers proper air circulation should be there.

3 Use a desiccant to absorb moisture in the storage place as moist atmosphere attracts fungs mildew.

4 Dry to store in a dark well ventilated place as constant exposure to light can fade the colour.

Dry cleaning: its a method of cleaning textile materials using chemicals, mainly to remove dirt, stairs etc. The usually used chemical is per chloroethylene (PERC). The dry cleaning chemical should be gentle and should not harm fabrics, should give good cleaning action and stable. Petroleum based solvents are mostly used for this. Care should be taken during this treatment as it can lead to destruction of the fabric itself.

Uses of starch and whitening agents

Starching is a temporary finish given to fabric to enhance its appearance, firm flimsy feel. Usually it done for cotton and cotton blends. It helps the cloth to have better soil (dirt) resistance and also makes ironing easier.

Whitening agents are those which can enhance fabric colour in white/creams fabrics without using bleaching agents. They are known as optical brightness. These are usually added in detergents to a certain level as it helps to have a much cleaner look.

These whitening agents can be used after washing the material thoroughly to remove the dirt and soil lemon is a good whitening agent.

Starching and whitening are usually done at home after each was to enhance the feel and appearance of the fabric and it also increases the serviceability of the material.

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Managing quality

Objectives : At the end of this lesson you shall be able to
- **manage quality through inspection**
- **explain histogram and pare to chart**
- **explain defects and their causes.**

In the beginning, to obtain an overall picture of where you stand in terms of quality, perform 100% final inspection of all styles for atleast two to three weeks and collect information. The following are various defects to look for:

1 Broken buttons

2 Broken snaps

3 Broken stitching

4 Defective snaps

5 Different shades within the same garment

6 Skipped stitch

7 Exposed notches

8 Exposed raw edges

9 Fabric defects

10 Holes near zipper

11 Loose/hanging sewing threads

12 Misaligned buttons and button holes.

13 Missing buttons

14 Broken needle found in garment

Knots

Piecing of broken threads with tail end or improper knotting.

Causes

When the thread breaks during the process of winding, warping, sizing and weaving if the knotting machine is not used it results in long tail end or thick knot.

Weaving defects

Missing ends

The fabric is characterised by a gap parallel to warp.

The number of ends missing may be one or more.

Causes

1 Loom not equipped with warp stop motion.

2 Drop wired dirty. Accumulation of lint may prevent their dropping.

3 In electric warp stop motion, the electro bars are dirty or corroded.

4 Bent or broken drop wires.

5 Even when the loom is equipped with warp stop motion the sized beam is such that it cannot be woven with warp stop motion on. This is in case of *soft beam*h and *damp beam*h or wet beam.

6 Excessive warp breaks.

7 The weaver is careless is not tying the end in time.

8 The basic yarn is of poor strength for the quality of fabric woven.

Oily or soiled ends

These are oily or soiled warp threads of longer length frequently seen at short intervals.

One skip on securing stitch or obvious skips on decorative thread affective appearance.

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