Vocational Higher Secondary Education (VHSE)

Second Year

FASHION AND APPAREL DESIGNING

Reference Book

Government of Kerala
Department of Education

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FOREWORD

Dear Learners,

This book is intended to serve as a ready reference for learners of vocational higher secondary schools. It offers suggested guidelines for the transaction of the concepts highlighted in the course content. It is expected that the learners achieve significant learning outcomes at the end of the course as envisaged in the curriculum if it is followed properly.

In the context of the Right- based approach, quality education has to be ensured for all learners. The learner community of Vocational Higher Secondary Education in Kerala should be empowered by providing them with the best education that strengthens their competencies to become innovative entrepreneurs who contribute to the knowledge society. The change of course names, modular approach adopted for the organisation of course content, work-based pedagogy and the outcome focused assessment approach paved the way for achieving the vision of Vocational Higher Secondary Education in Kerala. The revised curriculum helps to equip the learners with multiple skills matching technological advancements and to produce skilled workforce for meeting the demands of the emerging industries and service sectors with national and global orientation. The revised curriculum attempts to enhance knowledge, skills and attitudes by giving higher priority and space for the learners to make discussions in small groups, and activities requiring hands-on experience.

The SCERT appreciates the hard work and sincere co-operation of the contributors of this book that includes subject experts, industrialists and the teachers of Vocational Higher Secondary Schools. The development of this reference book has been a joint venture of the State Council of Educational Research and Training (SCERT) and the Directorate of Vocational Higher Secondary Education.

The SCERT welcomes constructive criticism and creative suggestions for the improvement of the book.

With regards

Dr. P. A. Fathima
Director, SCERT Kerala

CONTENTS

ABOUT THE COURSE

Profession related to clothing and apparel is one of the oldest and most basic occupations of human beings, with a rich and varied past. Fashion has become an integral part of contemporary society. It is one of the focal topics of the print and electronic media, television, Internet, advertisements, music, movies and marketing. Hence a fashion related study is a key for several opportunities in many industries related to apparel, accessories, textiles, automobiles, films and advertisement.

India is known for its rich heritage of textiles and costumes. The global interest and demand for traditional Indian textiles and craftsmanship has aroused huge opportunities in the field of fashion and apparel industry for domestic market and export. Production of textiles and garments for Indian as well as international markets led to setting up of manufacturing and export units all over the country. The Fashion and Apparel industry in India is spreading and growing by leaps and bounds, providing employment to over a million people. Skilled and trained professionals are required by these units largely.

Professional in this area is mostly employed by wholesale or manufacturing outlets, where garments are typically created for mass production. In these settings, they tend to work as full or part-time members within a team. A number of apparel designers are self employed; they often create custom clothing and can work unusual hours to meet clients' needs.

In response to such a scenario the course 'Fashion and Apparel Designing' is being introduced at Vocational Higher Secondary Schools as an independent course in the vocational stream. Fashion and Apparel Design, as a profession, includes the entire process of designing and producing fashion apparels from the fibre and yarn stage to the finished product. This course offers skill in designing, construction and ornamentation of garments. It develops the students' skill in all aspects of fashion and apparel design such as pattern making, draping, sewing, finishing of garments, embroidery and other value addition techniques , marketing and merchandising. Students develop a fashion portfolio at the end of the course. They can undertake fashion projects from the initial stage to the finished garment.

Fashion Studies help the students to develop self confidence by improving their skill in selection and making of their own clothes. This course gives more importance to self employment, thereby increasing the living standard of a person

as well as his community. It also helps students to make an informed decision about their future goals. It enables vertical mobility to students who wish for higher education after VHSE. After successful completion of this training the students may be able to join:

    a. B.Voc in Fashion Designing.

    b. B.Voc in Apparel Manufacturing Technology.

    c. B.Sc Fashion Technology / Costume and Fashion Designing.

    d. Diploma in Fashion Designing/ Apparel Manufacturing.

MAJOR SKILLS

1. Measure and record body measurements for drafting and garment construction accurately.

2. Draft Basic Pattern Set.

    a) Handle pattern making tools effectively.

    b) Identify terms, symbols and information used in pattern making.

    c) Distinguish different methods of pattern making.

    d) Draft basic block patterns.

3. Skills in drafting patterns with variation.

    a) Draft patterns of sleeve variations.

    b) Draft patterns of skirt variations.

4. Constructing Household textiles.

    a) Choose suitable materials for household textiles.

    b) Construct pillow cover with standard measurement.

    c) Construct apron with standard measurement.

5. Skills in custom tailoring.

    a) Construct A-line frock.

    b) Construct Kameez.

    c) Construct Salwar.

6. Skills in industrial tailoring.

    a) Construct shirt.

7. Skills in commercial tailoring.

    a) Construct Kurtha.

8. Skills in applying elements and principles of design in fashion designing.

    a) Identify types of design.

    b) Select suitable lines, shapes, forms, colour, texture etc in designing of garments.

    c) Create different textural effects for garment designing.

    d) Create designs on the basis of the principle such as balance, proportion, rhythm, emphasis, harmony.

9.   Skill in applying colour in fashion designing.

    a) Skill in colour mixing.

    b) Choose pleasing colour schemes for garments.

    c) Skill in colour rendering.

10. Skills in developing fashion figures.

11. Skills in developing fashion portfolio.

    a) Identify different boards in fashion portfolio.

    b) Visualize a theme by taking inspirations for designing.

    c) Create different boards in fashion portfolio.

    d) Design garments.

12. Attain skills in boutique management.

Syllabus

MODULE - III PATTERN MAKING & GARMENT CONSTRUCTION

3.1 BODY MEASUREMENTS   20 periods

Introduction - Learning outcomes - Body Measurements - Important Body Measurements - Standard Body Measurements - Points to be considered while taking body measurements - Figure Types - Normal Figure & Abnormality in Figures - Practicals - Assessment Activities - TE Questions.

3.2 PATTERN MAKING   80 periods

Introduction - Learning outcomes - Patterns - Importance of Pattern Making - Computer Aided Pattern Making - Types of Patterns - Tools & Equipments - Pattern Making Terminology - Pattern Development - Draping - Drafting - Finishing of Patterns - Pattern Defects - Drafting - Basic Pattern Set - Pattern Grading - Practicals - Assessment Activities - TE Questions.

3.3 GARMENT DESIGN DEVELOPMENT   70 periods

Introduction - Learning outcomes - Dart Manipulation - Stylelines - Sleeve Variations - Puff, Bell, Cape, Petal - Skirt Variation - A line, Flare, Circular - Pattern Alteration - Pattern Layout - Practicals - Assessment Activities - TE Questions.

3.4 CONSTRUCTION OF HOUSEHOLD TEXTILES   40 periods

Introduction - Learning outcomes - Household Textiles - Types and Use - Construction of Pillow Cover - Construction of Apron - Practicals - Assessment Activities - TE Questions.

3.5 CONSTRUCTION OF CHILDREN'S AND LADIES' GARMENTS 70 periods

Introduction - Learning outcomes - Construction of A - Line Frock - Construction of Salwar - Construction of Kameez - Practicals - Assessment Activities - TE Questions.

3.6 CONSTRUCTION OF GENTS' GARMENTS   60 periods

Introduction - Learning outcomes - Construction of Shirt - Construction of Kurtha - Practicals - Assessment Activities - TE Questions.

MODULE - IV - FASHION DESIGNING & BOUTIQUE MANAGEMENT

4.1 ELEMENTS OF DESIGN   30 periods

Introduction - Learning outcomes - Design - Types of Design - Elements of Design - Lines - Shape - Form - Colour - Texture - Light - Practicals - Assessment Activities - TE Questions.

4.2 PRINCIPLES OF DESIGN   50 periods

Introduction - Learning outcomes - Design Principles - Balance - Proportion - Rhythm - Emphasis - Harmony - Practical - Assessment Activities - TE Questions.

4.3 COLOUR   40 periods

Introduction - Learning outcomes - Dimensions of Colour - Prang Colour System - Colour Schemes - Colour schemes in dress - Colour Rendering - Practical - Assessment Activities - TE Questions.

4.4 FASHION ILLUSTRATION   100 periods

Introduction - Learning outcomes - Figure Illustration - 10 Head theory - Fashion Figure - Stick Figure - Fashion Figure - Block Figure - Fashion Figure - Flesh Figure - Figure Detailing - Illustration of hair styles. - Types of Necklines - Types of Collars - Types of Sleeves - Types of Trousers - Types of Skrits - Practical - Assessment Activities - TE Questions.

4.5 DESIGNING & PORTFOLIO DEVELOPMENT   100 periods

Introduction - Learning outcomes - Fashion Portfolio - Practical - Assessment Activities - TE Questions.

4.6 FASHION MERCHANDISING AND BOUTIQUE MANAGEMENT
       20 periods

Introduction - Learning outcomes - Fashion Merchandising - Duties and responsibilities of a Fashion Merchandiser - Visual Merchandising - Boutique - Meaning - Boutique Management - Practical - Assessment Activities - TE Questions.

MODULE - III
PATTERN MAKING & GARMENT CONSTRUCTION

The global fashion apparel industry is one of the most important sectors of the economy, in terms of investment, revenue, trade and employment generation all over the world. The importance of fashion in recent years has increased tremendously. Fashion has its impact on every stage of life. Fashion trends keep changing rapidly and one has to keep abreast of new developments to be in par with it. Pattern making plays a pivotal role in garment construction. Good knowledge of pattern making can help in pattern alteration which is essential in fashion industry. Taking body measurements, making patterns, laying out patterns and of creating garments for ladies, gents and children have been included in the third module. These are essential and fundamental steps which help in designing dress according to a person's body, figure and latest trends. Successful completion of module - III will enable the learners to construct garments using standard measurements.

UNIT - 3.1
BODY MEASUREMENTS

3.1.1.   INTRODUCTION

For a garment to be well tailored, the first and foremost essential requirement is to understand about the standard body measurements and to record individual body measurements accurately. Knowledge of standard body figure is a must for pattern making. However some manufacturers prefer not to use standardized measurements and to change measurements quickly to suit customer needs. This chapter deals with the points to be taken care of while taking measurements along with the different measuring points and types of figures in detail.

3.1.2. LEARNING OUTCOMES

The learner:

- Explains the need of taking accurate body measurements.

- Identifies and lists the important body measurements like bodices' measurements, skirt or trouser measurements and sleeve measurements.

- Recognizes and compares the given / taken measurements with standard measurements.

- Uses the standard measurements in garment construction.

- Identifies the points to be considered while taking body measurements.

- Measures and records the body measurements accurately.

- Distinguishes between different figure types.

- Explains the alterations to be carried out while taking measurements of abnormal figures.

3.1.3.   BODY MEASUREMENTS

Human figure is composed of complex geometric shapes. The accuracy of any pattern making or garment construction method depends largely on relevant and correct body measurements. It is very necessary to understand the different measurements, in order to perform a proper drafting method and stitching procedure. So knowledge about body measurements is important in pattern making and garment construction.

3.1.4. IMPORTANT BODY MEASUREMENTS

a) Bodice Measurements: These are the measurements required for developing garments which covers the upper part of the body.

1. Neck: This measurement is taken for making collars and necklines. Measure around the neck, passing tape just above the collar bone in front and along the base of the neck at the back.

2. Chest: The measurement of chest is taken for making all upper torso garments like blouses, kurta, kameez, shirts etc. This is taken below the scye point and above the bust point.

3. Bust: Bust measurement is taken for ladies and chest measurements for kids and men. This measurement is taken across the chest, at 2" below scye point, over centre front bust point. Take the measurement around the bust using the measuring tape allowing 2 fingers loose.

4. Waist: This measurement is taken, around the lower point of the waist (Where cords are tied or trousers are fit). The measurement of waist is taken for making all garments that cover the waist like blouses, kurta, kameez, shirts, skirts, trousers etc. Waist is the narrowest part of the body.

5. Hip: This measurement is taken at the most wider part of the hip.

6. Front Waist Length / Waist Height: This is the measurement from the base of throat to waist line.

7. Back Waist Length: This measurement is taken from nape to waist line.

8. Shoulder Width: Shoulder measurements are required for all types of upper torso garments. It is the measurement from the nape of neck to each sides of the hand. Measuring tape placed at the middle of the neck and measurement taken at both sides of the upper hands.

9. Back Width: This is taken from 1" above the midpoint of the scye.

10. Scye Depth: Hand is placed straight and the measurement is taken around the armhole. The measurement of armhole is taken for making sleeves.

b) Sleeve Measurements

11. Sleeve Length: Measure from tip of shoulder to required length of sleeve.

12. Under Arm Length: This measurement is taken from inner part of the hand to the scye to the wrist.

13. Upper Arm Circumference: Measure around the fullest part of the arm

14. Wrist: This measurement is taken around the wrist and this is used for stitching full sleeve
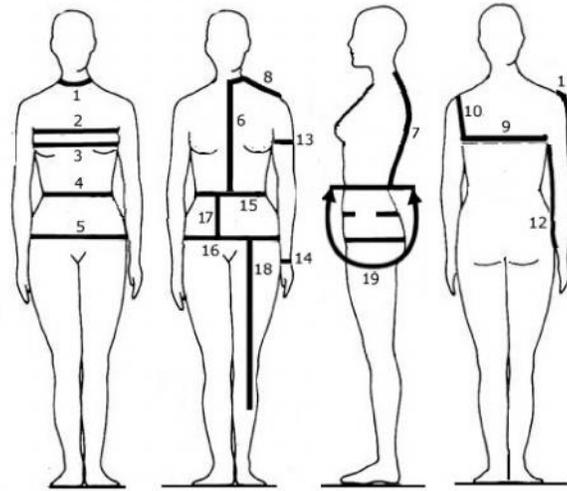
Fig.3.1.1. Body Measurements

c) Skirt/Trouser Measurements:

15. Waist: This measurement is taken, around the lower point of the waist (Where cords are tied or trousers are fit).

16. Hip: This measurement is taken around the wider part of the hip. the measurement of hip is taken for making all garments that cover the hip like kurta, kameez, skirts, trousers etc.

17. Waist to Hip: Measure down from waist at centre back to fullest part of the hip.

18. Skirt Length: From waist to desired length for skirt.

19. Crotch Length: Measurement from centre back under the crotch to the centre front waist. This measurement is useful for pants, pyjamas etc.

3.1.5. STANDARD BODY MEASUREMENTS

These are the measurements of standard human figure. These measurements are used in readymade garment industry. In direct measurement method we must take the measurement of customer for constructing garments. This method is not applicable in the industry or where the garment production is in bulk. In such cases the chest measurement method is followed. Drafts are prepared for different chest measurements and measurements according to age.

Standard measurement charts are followed for children, in which age is the basic factor (Table 3.1.1 and Table 3.1.2) Standard measurements charts are available for adolescent and adults in which chest is the basic factor for determining all other sizes (Table 3.1.3 and Table 3.1.4). These charts are very useful for professional pattern makers and tailors.

TABLE 3.1.1 - STANDARD MEASUREMENT CHART FOR CHILDREN

Age	SIZES							
	Chest	Waist	Hip	Shoulder Width	Sleeve	Shoulder to Waist	Frock Length	Pant Length
	A	B	C	D	E	F	G	H
1 Year	18" 46 cm	18" 46 cm	18" 46 cm	8" 20 cm	10" 25 cm	7" 18 cm	15-16" 38-41 cm	16-18" 41-46 cm
2 Years	20" 51 cm	20" 51 cm	20" 51 cm	8.5" 22 cm	11" 28 cm	7.5" 19 cm	16-18" 41-46cm	18-20" 46-51cm
3-4 Years	22" 56 cm	22" 56 cm	22" 56 cm	9" 23 cm	12" 31 cm	8" 21 cm	20-22" 51-56cm	20-22" 51-56cm
5-6 Years	24" 61 cm	22" 56 cm	24" 61 cm	10" 25 cm	14" 36 cm	9" 23 cm	24" 60 cm	22-24" 56-61cm
7-8 Years	26" 66 cm	23" 58 cm	28" 71 cm	11" 28 cm	17" 43 cm	10" 25 cm	26" 66 cm	26-28" 66-71 cm
9-10 Years	27" 68 cm	24" 61 cm	30" 79 cm	12" 31 cm	19" 48 cm	11.5" 29 cm	28" 71 cm	28-30" 71-76 cm
11-12 Years	28" 71 cm	24-25" 61-64 cm	32" 81 cm	13" 33 cm	21" 54 cm	13" 33 cm	30" 77 cm	30-32" 76-81cm

TABLE 3.1.2 - STANDARD MEASUREMENT CHART FOR TEENAGERS

Age	SIZES						
	Chest	Waist	Hip	Shoulder Width	Sleeve	Shoulder to Waist	Frock Length
	A	B	C	D	E	F	G
12 - 13 Years	30	12.5	6	24	12.5	16.5	32
14- 15 Years	32	13	6.5	25	13.5	17	34
16 - 17 Years	34	13.5	7.25	25.5	14.5	17.5	36
18 - 19 Years	35	14	7.5	26	15	18	37

TABLE 3.1.3 - STANDARD MEASUREMENT CHART FOR LADIES

Age	SIZES						
	Chest	Waist	Hip	Shoulder Width	Sleeve	Shoulder to Waist	Frock Length
	A	B	C	D	E	F	G
32	32	12.5 - 13	7.25	25	13.5	22	36
34	34	13 - 13.5	7.5	26	14.5	22.5	38
36	36	13.5 - 14	7.5 - 7.75	28	15	23	40
38	38	14 - 14.5	8	29	15.25	23	42
40	40	15	8.5	30	15.5	23.5	44

TABLE 3.1.4 - STANDARD MEASUREMENT CHART FOR GENTS

Age	SIZES						
	Chest	Waist	Hip	Shoulder Width	Sleeve	Shoulder to Waist	Frock Length
	A	B	C	D	E	F	G
34	34	28	7.5	35	14	22	40
36	36	30	7.75	37	14.5	22	41
38	38	32	8	39	15	23	42
40	40	34	8.25	41	15.5	23	42
42	42	36	8.5	43	16	24	43
44	44	39	8.75	45	16.5	24	43

3.1.6. POINTS TO BE CONSIDERED WHILE TAKING BODY MEASUREMENTS

• While taking measurements, first take length-wise measurements and then width-wise.

• Do not take measurements by self; it should be done by another person only.

• Stand erect/ straight and don't bend forward or backwards.

- The person who is taking measurements should stand at the right side of the person whose measurements are to be taken.

- While taking chest measurements one finger loose should be given.

- Measurements should be noted down while measuring it.

- While taking measurements body type of the person should be taken into consideration and therefore changes should be made accordingly.

- While taking measurements, the person's (whose measurement are taken) likes and needs should be taken care of and the measurements should be taken accordingly.

3.1.7.FIGURE TYPES

1. Normal Figure: This figure has height according to the age and the body parts are all proportional. So it is called proportional figure or normal figure.

2. Abnormality in Figure: Figures differ from a normal figure is called as abnormal figure. Some figures have disproportionate body part. Some abnormal figure s are listed below:-

    a. Short & Stout: Relative to the normal figure, this figure has less body length and are fattier in nature. Here, body shape is balanced on the behind part of the body. The shoulder length and shoulder width are less. Length of the neck is less but length of the front part is greater.

    b. Tall & Thin: Relative to the normal figure, this body type has less chest, hip, buttocks measurements. Height of the body is higher and is less fatty. Muscles are well built and weight less and the neck portion is lengthy.

Normal Figure   Tall & Thin Figure   Short & Stout Figure
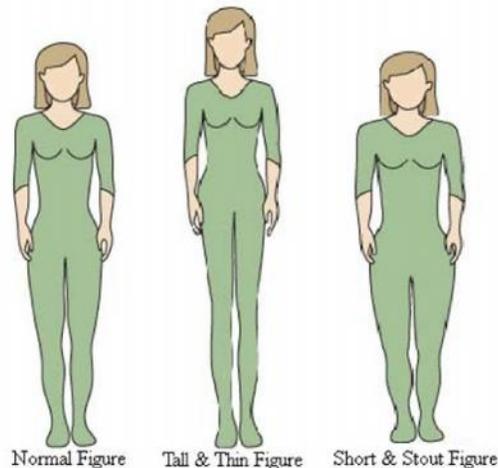
Fig.3.1.2 - Figure Types

c. Stooping Shoulder: Relative to the normal figure, shoulder slope is higher. Depth of the scye is greater and length of the neck is higher.


Normal Shoulders   Stooping Shoulder
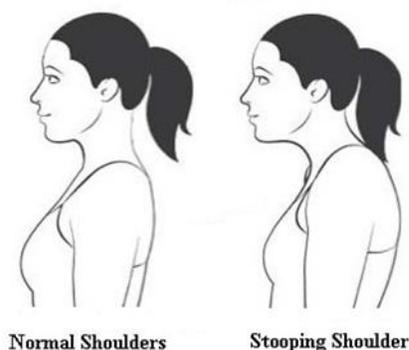
Fig.3.1.4 - Figure Types

d. Square Shoulder: Relative to the normal figure, shoulder slope is lesser. Besides, shoulder width is in a rectangular shape. For this person, length of the neck portion is less and the shoulder level is higher and length of the neck is shorter.

e. Sloping Shoulder: Relative to the normal figure, shoulder slope is more. For this person, length of the neck portion is more and the shoulder level is lower and length of the neck is higher.

Normal Shoulders   Sloping Shoulder   Square Shoulders
Normal Neck   Long Neck   Short Neck
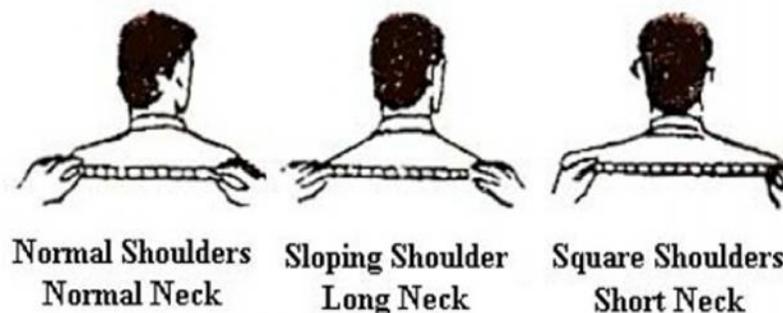
Fig.3.1.3 - Figure Types

3.1.8. LIST OF PRACTICALS

1. Body Measurements

Take body measurements of 5-6 classmates & record it. Prepare a chart.

3.1.9. ASSESSMENT ACTIVITIES

1. Assignment
2. Seminar
3. Practical activity
4. Work diary
5. Class Test
6. Portfolio

3.1.10.T E QUESTIONS

1. A friend of your wants to take accurate body measurements for stitching a dress. Help her by explaining important points to be considered while taking body measurements.

2. Differentiate the figure types on the basis of their body measurements.

3. Name the body measurements required for the construction of a:

   a) Kameez

   b) Salwar

UNIT - 3.2
PATTERN MAKING

3.2.1. INTRODUCTION

Pattern making is an art of manipulating and shaping a flat piece of fabric to conform to one or more curves of the human figure. Creating basic patterns begins with a two-dimensional piece of paper (for drafting) or muslin (for draping). Patterns confine the dimensions of the figure by a series of straight lines and curved lines. A completed pattern has seam allowance, pattern symbols, grain line and pattern information. Pattern alteration and pattern grading are essential as they help in creating patterns suitable for all figure types. This chapter gives an insight into the basics of pattern making.

3.2.2. LEARNING OUTCOMES

The learner;

- explains the concept of pattern making and its importance.

- explains computer-aided pattern making.

- distinguishes between different types of patterns and explain their specific uses.

- uses and handle patternmaking tools effectively.

- identifies and explain the terms used in pattern making.

- distinguishes between different methods of pattern making.

- explains the flat / drafting & draping methods of pattern making.

- distinguishes between the advantages and disadvantages of patternmaking methods

- identifies the symbols and information in the patterns.

- explains the use of notches, punches and symbols in patterns

- uses the symbols and information in the patterns for its proper use.

- identifies and explain the pattern defects.

- identifies the basic parts of pattern.

- draft basic pattern set.

- explain pattern grading.

3.2.3. PATTERNS

Patterns are the outline of each components of a garment. Pattern making is the technique to make patterns for all components of a garment. It is an art of manipulating and shaping a flat piece of 2D fabric into 3D garment form. Pattern making is a bridge between design and production. A sketch can be turned into a garment through a pattern which interprets the design in the form of the garment components. The job of a pattern maker is to interpret the designs into sample pattern pieces then drafting them. Pattern for a garment is the blue print on the basis of which the fabric is cut. Patterns are achieved by two methods namely, Flat method and Draping method.

Fig.3.2.1. - Patterns

3.2.4. IMPORTANCE OF PATTERN MAKING

- Basic pattern can be used for making dresses with same measurements.

- New patterns can be made by making changes in the basic pattern.

- Used for changing shapes & sizes.

- It is useful for both beginners and well-experienced persons.

- It helps to save time and cloth while cutting cloth using patterns.

3.2.5. COMPUTER AIDED PATTERN MAKING

There is computer software programs designed for pattern making for both industrial and home use. Computer-aided design (CAD) software can be purchased and loaded onto one's home computer in order to help design new patterns or modify existing ones. These programs allow the user to resize and alter patterns for a more custom fit or to modify patterns according to one's preference or need. The CAD will draw, adjust and calculate measurements for the pattern. The sewer then prints, cuts out and uses the pattern for project.

3.2.6. TYPES OF PATTERNS

1. Basic Pattern / Block Pattern: The pattern we make for garment manufacturing is called a basic pattern. Different patterns suitable for different styles can be

developed from this basic pattern. It is also called Sloper or Block pattern. e.g. Basic Bodice, Basic Skirt, Basic Sleeve etc

2. Working Pattern: For developing styles from a pattern, for slashing & manipulating, we use pattern, and these patterns are called working patterns. Different experiments and changes can be made in this pattern. e.g., Collar band, Pocket etc.

3. Production Pattern: The patterns we build up after completing it with necessary seam allowance and marking required is called production pattern. The information such as symbol, cut number, allowances etc. are marked. We cut clothes using this pattern.

4. Industrial Patterns: The patterns which we use for mass production in readymade garment industry are known as industrial pattern. e.g., Shirt patterns

5. Commercial Patterns: It is readymade patterns available in the market. It is constructed according to the standard measurements. It contains all instructions to cut and stitch the garments.

6. Personal Patterns: The Pattern which is used for customized tailoring is coming under this category which is being prepared for a specific measurement exclusively for a person.

7. Graded Pattern: In industry the patterns are graded according to the size requirement based on the order. Usually, the medium size patterns are graded to other sizes by applying grade rules.

8. Computer Aided patterns: Nowadays patterns are made through software with the given measurements and it is being graded to other sizes also.

3.2.7. TOOLS & EQUIPMENTS

1. Dress Forms: A standardized duplication of a human form, cotton padded and canvas covered, set on a movable, light adjustable stand and compressible shoulders and sloper. It is used to take measurements, develop patterns, fit garment samples, to alter garments, to establish style lines for the garment.


Fig.3.2.2. - Dress Forms

Fig.3.2.3. - Measuring Tape

2. Measuring Tape: Measuring tapes are very essential for acute drafting and perfection. It is used to measure a figure or a model form as well as drafting patterns. It is 60" long and ½" wide with metal strip on one side. Metal tips on either side help the tape to flat and keep the ends from fraying.

Fig.3.2.4. - Ruler

3. Rulers: It is a 12"/24" ruler used for drawing straight lines as per measurements. Wooden, metal and plastic rulers are available. The marking and divisions on the ruler should be clear and accurate.
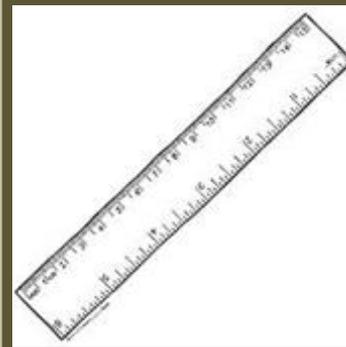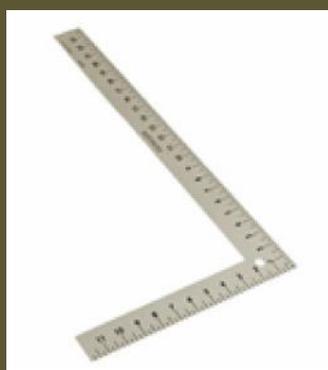
Fig.3.2.5. - L-Scale

4. Tailors square/ 'L' Square: A 24"X14" metal ruler with two arms that form a 90 degree angle. To find a 45 degree angle mark outside and inside corners extend line through corners. Tailors square are also available in plastic.

5. French curve: A curved ruler to draw curved lines of armholes and necklines in women's wear.
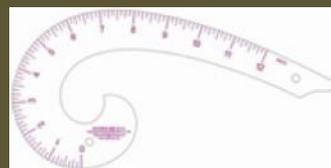
Fig.3.2.6. - French Curve

6. Hip Curve: A curved ruler to draw curved lines for women's wear. Hip curves are available in different sizes. Smaller ones are used for drafting in books in reduced scale.
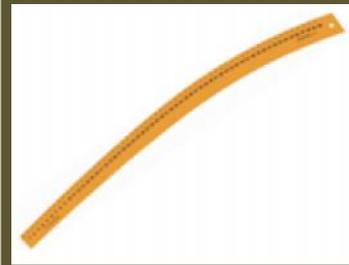
Fig.3.2.7. - Hip Curve

Fig.3.2.8. - Scissors

7. Scissors: A cutting instrument, ranging in size from 8" to 12", with two sharply pointed straight blades. Used to cut paper patterns and fabric. Paper cutting scissors and cloth cutting scissors are different.

8. Notcher: It is a punching tool for producing U-shaped notch ¼ inch deep by 1/6 inch wide. It is used to make notch marks which indicates seam allowance, central lines etc. It looks like a single punch machine.

Fig.3.2.9. - Notcher

Fig.3.2.10. - Tailor's Chalk

9. Tailors' Chalk: It is available in various colors with fine edges and used for accurate marking. These types of chalks rub off easily and can be used on right side of the fabric.

10. Tracing Wheel: it is used to transfer lines or symbols from one pattern to another or from final pattern to muslin or other fabric.

Fig.3.2.11. - Tracing Wheel

Fig.3.2.12. - Pins & Holder

11. Pins & Pin holder: A small firmly stuffed pillow made in a variety of shapes and sizes. It is used to hold pins, needles for easy accessibility and storage.

Fig.3.2.13. - Stiletto

12. Stiletto: A metal rod that tapers to a needle point, approximately 1/8 inch(3.2mm)in diameter by 3 to 8 inches(8 to 20 cm) in length, with a wooden or plastic handle. Typical uses are punching dart ends on blocks or patterns, marking placement of pockets, trimmings, or bands on patterns, marking punch-hole placement in fabric.

Fig.3.2.14. - Brown Paper

13. Thick brown paper: Brown paper is used for drafting. Use strong brown papers for finished pattern. Used for preliminary patterns drafting and development of the final pattern.

3.2.8. PATTERN- MAKING : TERMINOLOGY

1. Block/sloper: Sloper is a term given to a very basic set of pattern piece used to make patterns of any style. This is a term for a paper cutting of basic bodice, skirt, sleeve or any such basic pattern from which all the other designs are developed. Block normally represents the dimensions of a specific form or figure. It has darts to fit to the contours of the body but no other design features. It is a foundation that is used to make the pattern for a design and has no seam allowances. It is important that the correct block is chosen for the design; this not only saves time during adaptation

but can affect the final shape. The basic blocks can be drafted to fit individual figures by using personal measurements instead of the standard measurements listed in the size chart.

2. Muslin: Muslin is used for making test fits. This is basically an unbleached plain woven cotton fabric. It is available in light, medium and heavy weight. Medium quality is used for test fitting and draping.

3. Pattern: Pattern is developed from the block that includes all the information needed for cutting and production of the garment including seam allowance.

4. Seam Allowances: The amount of seam allowance required for each seam line may vary depending on the location and end purpose. Generally the seam allowances as followed in the industry are -

   - ¼" - for sharp curves

   - ½" - for smoother curves like neckline, armhole, waistline, style line, etc.

   - 1" - for straight seam line like side seam, centre line, shoulder, plackets, etc.

   - 2" - for straight edge hem line in dresses, skirts, etc.

5. Ease: Ease is the amount of a garment allows the wearer beyond the measurements of their body. Ease is not generally included in sizing measurements. Ease is comprised of two separate measurements, wearing ease and design ease. Wearing ease is the amount added to a person's body measurements so one can move in a garment. Design ease is the amount of fullness added at the key body points, that creates the overall look or style of a garment. Wearing ease for different body parts are :

   - Bust area - Add 2 to 4 inches to the bust measurement. The larger the bust and body size the more ease to factor in.

   - Waist area - Add ½ to 1 ½ inches to allow for turning around, bending and raising arms.

   - Hip area - Add 2 to 4 inches, again, the larger the body size or give of the fabric, the more ease to consider.

6. Grain Line: Grain line is a line drawn from end to end on each pattern piece to indicate how the pattern should align with the lengthwise grain of the fabric. The pattern pieces will always be placed parallel to the selvedge

on the fabric in the direction in which the grain line is drawn on the pattern.
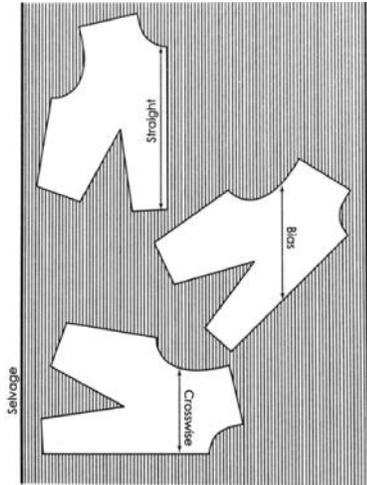

Fig.3.2.15. - Grain Lines
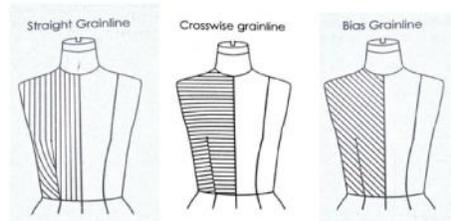
Fig.3.2.16. - Grain Lines

7. Basic Pattern Set: It is a 5-piece pattern set consisting of a front/back bodice front/back skirt and a long sleeve, which represents the dimensions of a specific form or figure. It is developed without design

Fig.3.2.17. - Basic Pattern Set

features and is always traced for pattern development.

8. Balance: Refers to hang and proportion of the garment. Fashion does determine balance to a certain extent, for example is it appropriate to wear long tops over short skirts. Where the flat pattern cutting is concerned it is often difficult to judge correct balance until the garment is test-fitted in fabric.

9. Balance Marks: Marks made on edges of complimentary pattern pieces that indicate corresponding seam line and area. They are a useful construction guide on all seams. However, balance marks are vital in a pattern if two pieces have different edge or shape that are required to be joined or where one seam line is longer or fuller than another. While doing pattern cutting make short pencil marks at the edge of the paper, copying them through all stages till the final pattern. On readymade paper patterns balance marks are indicated by triangles and are referred to as notches

10. Dart: Wedge shape or triangular shape marked on the pattern that controls the fit of the garment.

Dart legs - The two sides of the triangular shape & should be of the same length.

Dart point - The point at which the dart ends.

Dart intake - The amount of suppression taken between the dart legs.

Apex - The highest point on the bust

Darts radiate from the highest point of a mount/ rise on a body, these mounts are generally rounded. If the darts on front bodice are stitched till the apex they would

Fig.3.2.18. - Dart

create a point on the apex and strain the garment. The body is rounded and not pointed hence to avoid these strains or pulls on the garment the darts need to be finished away from apex.
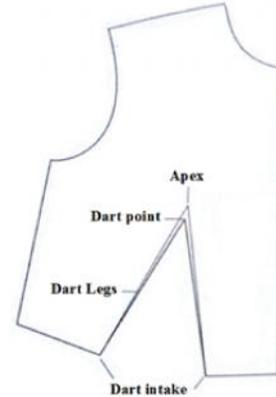
3.2.9. PATTERN DEVELOPMENT

Pattern development is the process of transforming a design into its required flat pattern pieces and then drafting them out, the job of a pattern maker is to interpret the designer's into sample pattern pieces and then drafting them. Pattern making covers principles of constructions and techniques in a wider sense rather than style details in a narrow sense. It opens scope for infinite variety of styles both for regular designs and impulsive patterns. Pattern making can be divided in two stages namely measuring correctly & knowledge of technique devised to include necessary seam allowances. Measuring the human body is the precursor to developing garments to fit the body. Measuring scales range from simple measuring tape to complex body scanners and low to high tech. Pattern for a garment is the blue print on the basis of which the fabric is cut and the same is achieved by the following methods:

a. Draping Method

b. Flat Drafting Method

3.2.10. DRAPING

A cloth is draped on a dress form for making a garment in accordance with the body shape of a person. We can make patterns on the basis of a selected

pattern. A dress form with correct (accurate) measurement helps to make a suitable dress model and also helps to do construction of garments more easily. Dress form can be used as dress stand also. For making a dress for a person, we drape the dress in the dress form having his/her correct measurements.

Draping method is the oldest pattern making method and is generally regarded as a creative approach. In this method a piece of two-dimensional fabric is draped directly on a dress form or figure and made to fit on the dress form to achieve the desired look or shape. The fabric may conform to the basic shape of the form or arranged artistically in folds for a specific design. This

Fig.3.2.19 - Draping

muslin pattern is then transferred on the paper, corrections are made, if any, and then the same are converted into a final pattern.

3.2.10.1. Three Stages of Draping

*   A muslin cloth is spread on a dress form & attached it to using a pin. Mark darts using tailor's chalk for getting correct size& shape. After fitting the dress correctly in the dress form, it is removed from the dress form.

*   Then, using tracing wheel & carbon paper, the parts we marked in the muslin cloth and darts are copied on a brown paper. Thus, we can develop suitable patterns.

*   Using temporary stitches we can make a dress and wear it on a dress form and after rectifying the defects it can be stitched.

3.2.10.2. Principles of Draping

*   Always use grain lines.

*   Straight grain should always run perpendicular to the floor and cross grain parallel to the floor.

*   The body lines such as bust line, waistline, hipline etc should be parallel to the floor

*   Use good quality pins that do not loose shape easily.

*   Establish seam lines on the form

*   Tear the muslin piece instead of cutting

*   Check the balance of the warp and weft

- Mark grain line on muslin; mark cross grain at the fullest part of the dress form
- Place the muslin on the form as per the marked lines, place it in position with pins

3.2.10.3. Advantages of Draping

Draping is advantageous because without cutting the fabric one can know the entire effect of a garment rather than just minute details. It is a three dimensional method, the design can be visualized while draping and any necessary changes can also be made. Dress form can be of particular size or of standard measurements. This helps the designer to achieve the difficult designs by draping different fabrics. For designs such as cowls this method alone can offer good results. In draping we can see the features of garment, and characteristics postures in relation to fabric and time into which we are going drape it, and immediately we can sense the harmony between draped fabric and wearer.

3.2.10.4. Disadvantages of Draping

It is an expensive technique of garment construction. Draping requires more talent than required for flat pattern design. Initially dresses are draped on dummy with a cheaper fabric so sometimes the look of the garment cannot be assessed precisely by this method.

3.2.11. DRAFTING

Flat Pattern Drafting is a method where body or dress form measurements are taken for developing a pattern. With step by step procedure, the measurements are then converted into a pattern. This system depends on accurate measurements to complete the paper pattern. There are limitless designs, which can be achieved for workable garments. Flat drafting may be done in conjunction with a dress form so that as the design evolves, proportion and balance in the garment can be checked side by side. It is important to transfer the pattern on to a muslin to test the fit, on a dress form or a human figure. Flat pattern cutting is now widely used because of its accuracy of sizing and the speed with which complicated designs are made. By manipulating basic blocks we can create new designs.
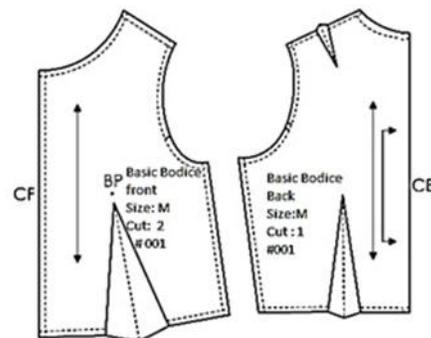

Fig.3.2.20. - Drafting

Pattern drafting is a system of pattern cutting that uses a combination of ease allowance and body measurement taken from body measurement of the customer or dress form measurement to create patterns for the chosen design. Drafting is easy to understand and is considered as the fastest and most efficient pattern design method.

3.2.12. FINISHING OF PATTERNS

Finishing of patterns means writing the name, size, number etc. on pattern pieces. Symbols are also used for easy cutting and use of patterns.

3.2.12.1. Pattern Information on Industrial Blocks

- The name of the each piece

- The size of the each piece

- Number of pieces to be cut

- Landmarks

- Symbols (Folding symbol etc.)

- Balance line marks

- Seam allowance

- Construction lines

- Grain lines

- Style number

- Notches - Marks that are needed to help assemble garment sections correctly.

- Directional Fabrics - For fabrics which have designs in one direction such as floral print, stripes, plaid, velvet, fur etc. A symbol "cut one way" or (?) is indicated on the pattern.

- Seam Allowances.

3.2.12.2. Symbol keys used in Pattern making

↕ - ↓	Double headed arrow grain line or Direction of Warp yarn
↑ - ↑	One headed arrow grain line or one way direction of Warp yarn
- - - - - - - - - -	Seam line
⊙	Punch/Circles or Perforation mark
△	Dart Symbol
▽	Pleat Symbol
#	Style Number
——×	Cut no further or Cut up to the cross mark
⌐	On fold symbol
I	Vertical Button hole symbol
⊢—◦	Horizontal Button hole symbol
╱	Diagonal Button hole symbol
≡≡≡≡≡≡≡ or ⌣⌣⌣⌣⌣	Gathers symbol
⊥	Slit mark
———	Final line or Cutting line
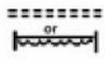
Fig.3.2.21. - Pattern Symbols

3.2.12.3. Abbreviations in pattern making

CB	Centre Back	CF	Centre Front
BP	Bust Point	SS	Side Seam
SW	Side Waist	SH	Shoulder
HPS	High Point Shoulder	CH W	Chest Width
FL	Full Length	WL	Waist Length
Sl. L	Sleeve Length	AH	Arm Hole
X-B	Across Back	X-F	Across Front
X-SH	Across Shoulder	Pkt	Pocket
Plkt	Placket	CB L	Center Back Length
CF L	Centre Front Length	NK	Neck
B to BH	Button to Button Hole	CLR	Collar
CLR P to P	Collar Point to Point	SH L	Shoulder Length
SL	Side Length	NW	Neck Width
NK R	Neck Round	HBL	Horizontal Balance Line
VBL	Vertical Balance Line		

3.2.13. PATTERN DEFECTS

- Some parts of pattern are missing, -- probably because the marker did not include the correct number of parts.

- Mixed parts-- probably because the marker is not correctly labeled, resulting in a marriage of wrong sized parts.

- Patterns not facing in correct direction on napped fabrics. Not all patterns facing in same direction (either way) on a one-way fabric.

- Patterns not aligned with respect to the fabric grain.

- Poor line definition -- (e.g. too thick chalk; indistinctly printed line, perforated lay not powdered) leading to inaccurate cutting.

- Skimpy marking, --- caused by either the marker did not use the outside edge of the pattern; or the pattern was moved or swung after partial marking

to squeeze the pattern into a smaller space for economizing the fabric. Marking back from miniature markers also can cause trouble unless the miniature marker making is in the hands of experienced operators. Alternatively the full size pattern may be having worn out edges.

- Generous marking, especially in combination with skimpy marking results in components being sewn together with puckering and pleating. When the marker is too wide, the garment part at the edges of the lay get cut with bits missing. Not enough knife clearance freedom.

3.2.14. DRAFTING - BASIC PATTERN SET

The basic pattern is the foundation upon which pattern making, fit, and designs are based. The basic dresses made up of five distinct parts - Front bodice, Back Bodice, Front Skirt, Back Skirt and Sleeve.
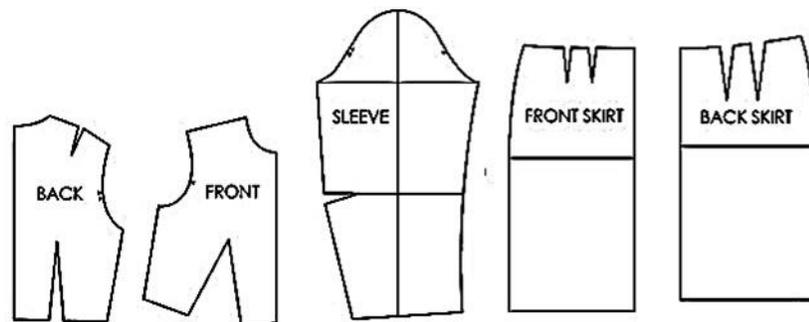
Fig.3.2.22. - Basic Pattern Set

3.2.14.1. Basic Bodice

Basic Bodice is one of the basic patterns that come under basic pattern set which covers the upper body part. It has darts to fit to the contours of the body but no other design features. It is a foundation that is used to make the pattern for a design and has no seam allowances. It is important that the correct block is chosen for the design; this not only saves time during adaptation but can affect the final shape. The basic blocks can be drafted to fit individual figures by using personal measurements instead of the standard measurements.

Measurements Required:

Center Back length (Full length) : 40 cm

Chest/Bust : 88 cm

Across Shoulder	:	36 cm
Waist Round	:	76 cm
Shoulder to Bust Point	:	24 cm
Bust Point to Bust Point	:	18 cm

Drafting Procedure:

Square across and square down from zero.

0 - 1 = chest/2 + 6cm

0 - 2 = Waist length

Square down to mark 3

2 - 3 = 0 - 1

1 - 3 = 0 - 2

0 - 4 = Chest/4 + 3cm (for drafting back bodice)

Square down to mark 5

0 - 6 = chest / 4

Square across to mark 7

6 - 7 is the chest line.

0 - 8 = 1/12th chest for marking back neck width.

1 - 9 = 0 - 8

0 - 10 = 2 cm for back neck drop. Draw back neck curve 8 - 10

1 - 11 = 1/12th chest + 0.5 cm for front neck drop.

Draw front neck curve by joining 9 - 11

0 -12 = ½ shoulder

Square down up to chest line to mark 13

12-16 = 1.5 cm (½") for marking shoulder slope.

1 - 14 = 0 - 12

Square down till 15

14 - 17 = 12 - 16

Join 8 - 16 & 9 - 17

Mark point 18 where the chest line 6 - 7 intersect the centre line 4 to 5

Take the mid of 15 & 17 and mark 'a'.

a - a1 = 1.5 cm

Complete the curve by joining 17,'a1' and 18.

Take the mid of 13 & 16 and mark 'b'.

Complete the curve by joining 16,'b' and 18.

Measure 1.5 cm from point 5 on both side and mark 5a and 5 b.

Join 18 to 5a &15 to 5b for side seam.

Shoulder to bust point =   24 cm

Bust point to Bust point   =   18 cm.
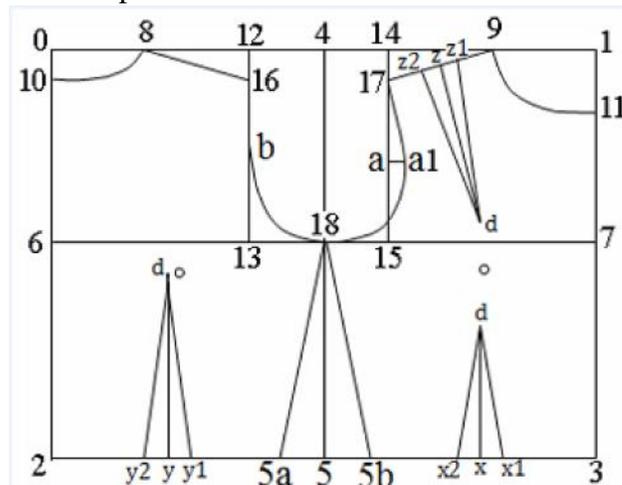
Fig.3.2.23. - Basic Bodice

Dart

Dart width/ intake calculations

Front dart(x)	=	Bust round - Waist round + side deduction/3
	=	88 - 76 + 4 /3
	=	88 - 70/3=8/3==2.66
Back dart(y)	=	Half of the front dart(x)
	=	2.66/2
	=	1.33

Shoulder dart (z)   =   Bust $/36 = 88/36$

                    =   2.4

Front Dart

Measure 3cm down for front waist dart from bust point and label dart point as 'd'.

From 'd' draw a line down till the waistline, mark 'x'.

      x - x1   =   ½ waist dart width towards left.

      x - x2   =   ½ waist dart width towards right.

      Join x1 - d - x2.

Back Dart

Measure 1 cm right from bust point and label dart point 'd'.

From 'd' draw a line down till the waistline, mark 'y'.

      y - y1   =   ½ waist dart width towards left.

      y - y2   =   ½ waist dart width towards right.

      Join y1 - d - y2.

Shoulder Dart

Find the mid-point on shoulder line mark z.

Draw a line from Z directing to Bust point, away by 3.5 cm and mark dart point'd'.

      z - z1   =   ½ waist dart width towards left.

      z - z2   =   ½ waist dart width towards right.

      Join z1 - d - z2.

Apply dart allowance for all the darts (Front Waist, Front Shoulder and Back Waist).

(Dart allowance should be approx. half dart width extended in the direction of center line (outside the block) of the dart and joined at the ends)

Complete the pattern with required pattern information

Mark grain lines and required land marks.
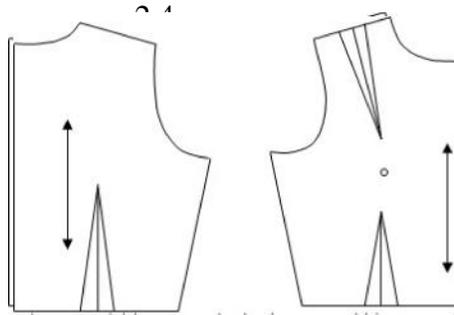
Fig.3.2.24. - Basic Bodice

3.2.14.2. Basic Skirt

Measurements Required

Skirt Length	:	29"
Waist Round	:	28"
Hip Round	:	34"

Drafting Procedure

Square across and square down from zero.

0 - 1   =   Skirt length

0 - 2   =   1/2 hip+1/2"

Square across from 1

and square down from 2 to mark the point 3.

0 - 4   =   1/4th hip+ 1/2"

Square down to 5

Mark CB &CF.

0 - 6   =   1/4th hip as waist to hip length.

Square across to 7 and mark line as hipline.

8 is the mid of 0 - 6

Square across from 8 to 9.Mark the line as top hipline.

4 - 4a   =   1/2"

Join 0 - 4a

0 - 10   =   1/4th waist+ 1/4th ease allowance + 1.5" for two back darts.

Draw the curve line from point 10 to the hip line

Join 2 & 4a.

2 - 11   =   1/4th waist+1/4th ease allowance + ¾" for the front darts.

Draw the curve line from 11 to the hipline.

12 is the mid of 2& 4a.

Square down just before the top hip line.

12a   =   12b

    =   3/8"

Join the dart legs

Divide 0 - 10 line into three equal parts and mark point 13 &14

13 - 15   =   ¼" before the top hip line.

13a   =   13b

    =   3/8"

Complete the dart by joining dart legs.

Square down from 14 to 16 up to top hip line

14a   =   14b

    =   3/8"

Complete the dart by joining dart legs.

Fig.3.2.25. - Basic Skirt
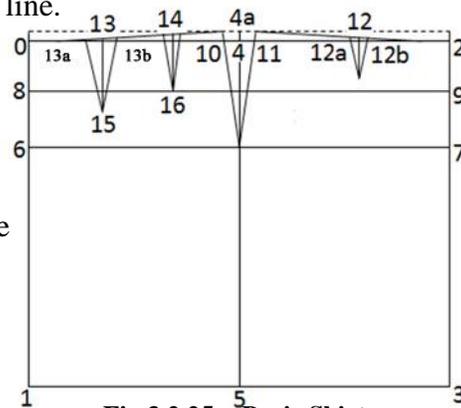
3.2.14.3. Sleeve

Measurements

Sleeve length	:	22.5"
Chest/Bust	:	34"
Sleeve Bottom	:	7"

Drafting Procedure

Square across and square down from zero.

0 - 1   =   Sleeve Length,

0 - 2   =   Chest/2 - 1½",

now square down from 2 - 3 and complete the block with dotted line.

4 is the mid of 0 - 2 and square down the line to 5.Now the block has been separated for applying front and back sleeve armhole curves.

$$0 - 6 \quad = \quad 1/8 \text{ chest}$$

Square across to 7

6 - 7 is the bicep line

Join 4 - 6 & 4 - 7

$$5 - 8 \quad = \quad 5 - 9$$
$$= \quad 1/2 \text{ bottom}$$
$$8 - 8a \quad = \quad 9 - 9a$$
$$= \quad 5/8"$$

Join the wrist curve 8a, 5, 9a

Join 6 - 8a & 7 to 9a

Divide 4-6 into three equal part and mark as 'a' and 'b'

$$a - a1 \quad = \quad 3/4" \text{ upward,}$$
$$b - b1 \quad = \quad 5/8" \text{ upward}$$

Take the mid of 4 - 7 and mark 'c'.

Find the mid of 4 - c &7 - c and mark point d & e.

$$d - d1 \quad = \quad 5/8" \text{ upward,}$$
$$c - c1 \quad = \quad 1/8" \text{ upward}$$
$$e - e1 \quad = \quad 1/4" \text{ down ward}$$

join the curve line 6 - a1 - b1 - 4 - d1 - c1 - e1- 7
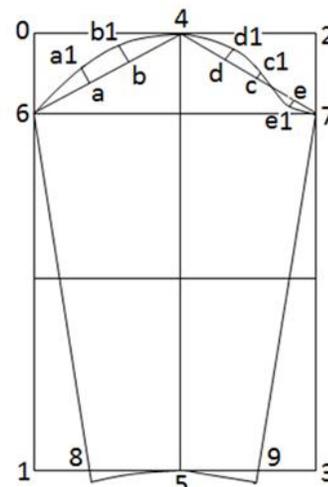
Fig.3.2.27. - Sleeve

3.2.15. PATTERN GRADING

Grading is the process used for creating sized patterns. Grading is a method of enlarging or reducing a pattern of a particular size proportionately to some other size. There are certain proportional rules and set increments that form the basis of grading. These rules are set on the basis of analysis on body measurements of the general population. The clothing firms also help in pattern grading using the specifications provided by the apparel manufacturers and some of them also assist the manufacturers in establishing specifications for their product. The grade rules are developed keeping in view the market segment for which the product is intended such as men, women, youth, child, toddler etc. These firms mostly use the software available in the market for checking the accuracy of the grades.

Methods of grading

There are three basic methods of grading:

Cut-and-spread method: The easiest method, which is the basis of the other two methods, is to cut the pattern and spread the pieces by a specific amount to grade up, or overlap them to grade down. No special training or tools are required-just scissors, a pencil, tape, and a ruler that breaks 1 in. down to 1/64

Pattern shifting: Pattern shifting is the process of increasing the overall dimensions of a pattern by moving it to a measured distance up and down and left and right, (using a specially designed ruler) and redrawing the outline, to produce the same results as the cut-and-spread method.

Computer Grading, is the fastest method, but tends to be an investment intensive and only larger manufacturers can afford. However, sophisticated home computer software is becoming affordable.

3.2.16. PRACTICAL

1. Drafting of Basic Bodice- Front and Back.

Draft and prepare paper pattern for front and back basic bodice with standard measurements.

2. Drafting of Basic Skirt - Front and Back.

Draft and prepare paper pattern for front and back basic skirt with standard measurements.

3. **Drafting of Basic Sleeve.**

   Draft and prepare paper pattern for basic sleeve with standard measurements.

3.2.17. ASSESSMENT ACTIVITIES

   1. Assignment

   2. Seminar

   3. Practical activity

   4. Work diary

   5. Class Test

   6. Portfolio

3.2.18. TE QUESTIONS

1. Explain the advantages/disadvantages of drafting to your sister who is a student of Fashion and Apparel designing.

2. List the methods of pattern developing.

3. Explain the methods of pattern making in which dress form and muslin cloth is used.

4. Write and essay/a note about pattern grading.

5. List the different parts of a pattern.

6. Discuss the importance of pattern making and present it in your class as a seminar topic.

UNIT - 3.3
GARMENT DESIGN DEVELOPING

3.3.1. INTRODUCTION

Developing a garment design is an indispensible part of fashion designing. With the help of a basic pattern, patterns suitable to specific body shape and purposes can be designed. Topics such as dart manipulation, pattern variations, pattern alteration, and layout are certain topics included in this chapter for enabling the learners to understand garment design development.

3.3.2. LEARNING OUTCOMES

The learner;

- understands the dart manipulation of basic bodice
- identifies sleeve variations
- drafts patterns of sleeve variations
- identifies skirt variations
- drafts patterns of skirt variations
- explains the importance of pattern alteration.
- explains the different methods of pattern alteration.
- alters patterns according to figure type.
- explains the importance and guidelines for laying out patterns
- layout patterns with minimum fabric wastage.

3.3.3. DART MANIPULATION

Flat pattern making is the fastest and most efficient method devised for developing design patterns that control consistency of size and fit of mass produced garments. Flat pattern making is based on three major pattern making principles and techniques:

- dart manipulation(relocating darts) : A dart may be transferred to any location around the patterns outlines from a designated pivotal point Without affecting the size or fit of a garment.

- added fullness(adding more fabric in the design) : To increase fabric in a garment to an amount greater than that provided by the dart excess of the working

pattern. The length and width within the pattern's outline must be increased.

- contouring(fitting to the hollows of a model's figure) : To fit the contours of the upper torso closer than does the basic garment the pattern must be reduced within its frame to fit the dimension of the body above, below and in between the bust mounds and shoulder blades.

Dart manipulation is the changing the location of a dart within the pattern frame. Dart is responsible for fit and will be part of the design in one form or another. Dart can be transferred to any location around the pattern's outline from designated pivotal points without affecting the size or fit of the garments. Dart manipulation is a useful tool for pattern maker for creating interesting, innovative dart placements and style lines. The darts can be stitched as new darts, as style lines, can be converted into tucks, pleats, gathers, yokes, etc. The basic fit of the garment is not altered by these manipulations.

A dart can be transferred to any location around the pattern's outline from a designated pivotal point without affecting the size or fit of the garment. When pattern making from previous blocks there are two methods for making an alteration to the dart, and these are also two of the main methods used for flat pattern making. The first method is called 'Cut and Spread' while the second is based on a 'Pivot' method.
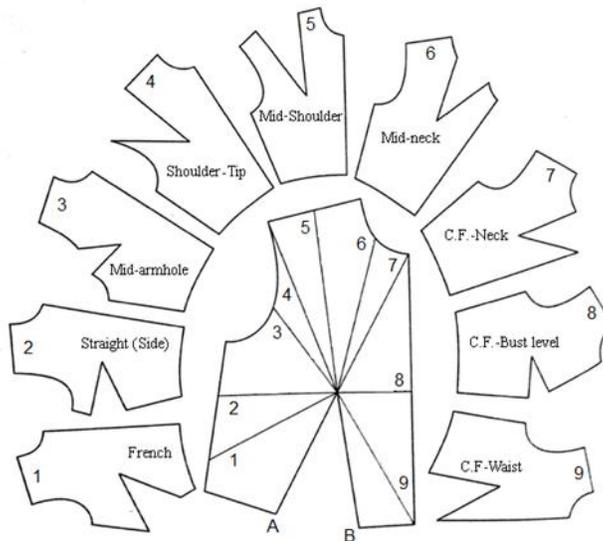
Fig.3.3.1 - Dart Transfer Locations

TECHNIQUES

1. SLASH - SPREAD / SLASH - OVERLAP:

Through this method, the patternmaker is able to see how the original working pattern changed into a design pattern. An easy way to rotate a dart on a flat pattern is to slice a straight line from the dart point to another edge of the pattern (the slash). The two pieces thus created can then be pivoted (spread) at the dart point to shift the dart to the position of the slash.

a. Trace the pattern. Mark the centre front waist dart. Label dart legs A and B.

b. Draws slash line from the dart point to the new position the dart. Here moving waist dart to shoulder dart. (Fig. 3.3.2_(A)).

c. Slash through the line to the dart point. (Fig. 3.3.2_(B)).

d. Close up the old dart to open the new one and tape the old one close. (Fig. 3.3.2_(C)).

e. Place pattern on paper and retrace. Centre dart point 5/8 " from bust point. Draw dart legs to dart points.
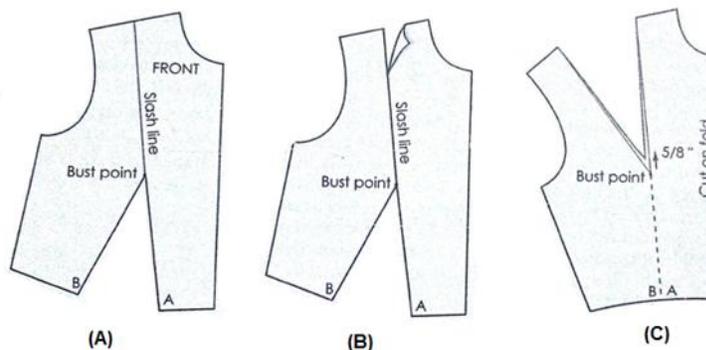
Fig.3.3.2 - Slash and Spread Technique

2. PIVOTAL TRANSFER

This method does not require the working pattern to be slashed in order to change its original shape into a design pattern. It is a faster method and, with experience it is preferred. The pattern is slashed to, or pivoted from, this point. This allows the pattern shape to be altered without changing its size or fit.

a. Place the pattern on paper with a push pin through the bust point (Pivotal Point).

b. Then one dart leg - A of the original dart is traced onto the paper.

c. Mark the new dart location as C (Here mid-neck location).

d. Trace the section of pattern from dart leg A to C on new paper. (Fig. 3.3.3_(A)).

e.   The pattern is then rotated around the pinned dart point until the dart leg B lines up with the traced dart leg A. (Closes waist dart and opens space for the mid-neck dart).

f.   Trace the remaining section of the pattern from dart leg B to point C on the pattern. (shaded area in figure) (Fig. 3.3.3_(B)).

g.   Draw the dart leg to bust point.

h.   Mark the centre the dart point 5/8" from the bust point. Redraw dart legs to the dart points. (Fig. 3.3.3_(C)).
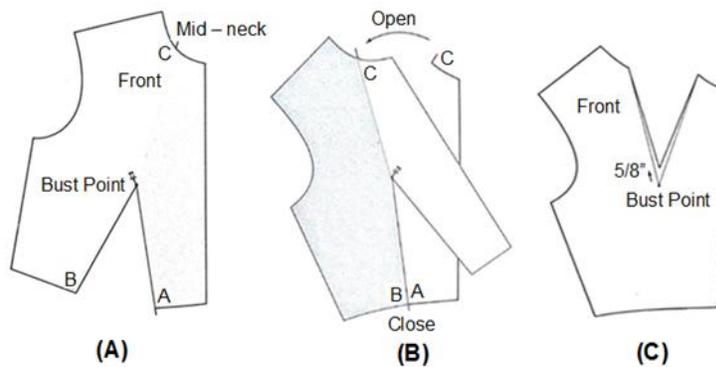
Fig.3.3.3 - Pivotal Technique

3.3.4. STYLELINES

Stylelines are two types - those that cross over bust and those that do not cross over bust. Stylelines that absorb dart excess within stitch lines, control the fit of the garment are called dart equivalents. Princess line is the name commonly given to panel lines that go through bust point, absorbing the dart value into the panel line. The seam line commonly curves from the armhole, down to the waistline through bust point, or from the center of the shoulder down through bust point to the waistline. Princess styleline is a popular base for design variations. Here we discuss about Armhole Princess Styleline.

1. ARMHOLE PRINCESS STYLELINE

The armhole princess styleline curves from the bust point in front and the shoulder blades in back to mid - armhole. The design can be developed through following steps.

Procedure

a. Trace pattern onto a new piece of paper. (Fig.3.3.4 - (A))

b. Next draw guideline for mid - armhole styleline by drawing through the bust point and along the dart arms into the armhole. (Fig.3.3.4 - (B))

c. Cut the pattern along the guidelines, discarding the dart value. (Design lines are often drawn through the highest and lowest curves of the body for close fitting garments, such as the bust point, or around the waist. This enables the panels to be cut in as close to the body as possible.) (Fig.3.3.4 - (C))

d. Place the patterns onto a new sheet. Trace the outlines of the patterns and smooth the curve of the panel lines by hand or by using a french curve ruler.

e. Draw the seam allowance onto the new panel lines and transfer the notch marks.

f. Cut out the pattern pieces making sure that all markings have been transferred. (Fig.3.3.4 - (D)).
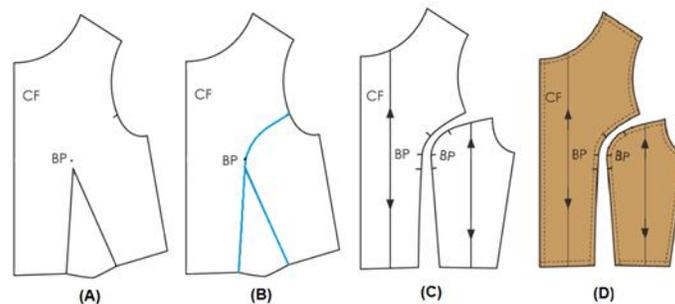
Fig.3.3.4 - Armhole Princess Styleline

3.3.5. SLEEVE VARIATIONS

Sleeve style best suited to one's figure, dress design, fabric and fashion does wonders to one's appearance. From a plain sleeve pattern one can develop different variety of sleeve styles. Puff sleeve, bell sleeve, petal sleeve, raglan, kimono etc are some of the sleeve variation.

3.3.5.1. Puff Sleeves

Puff sleeves are designed by fullness adding method. They are designed with gathers at the hemline, at the capline or at the hemline and capline.

A) **Puff sleeve gathered at capline only:** - This type of sleeve has no fullness at the lower edge. The top edge has fullness in the form of gathers.

Procedure:

    a. Trace the sleeve block.

    b. Draw vertical lines on sleeve block 1" apart. The centre line should be exactly between the two adjacent drawn lines.

    c. Cut right through all slash lines from top (capline) to near bottom edge (hemline).

    d. Keep the slashed pattern on top of another paper and spread opens the upper edge to get maximum amount of fullness.

    e. Increase sleeve length by 1" or 2" for puffing.

    f. Draw the puff sleeve on the new sheet of paper.
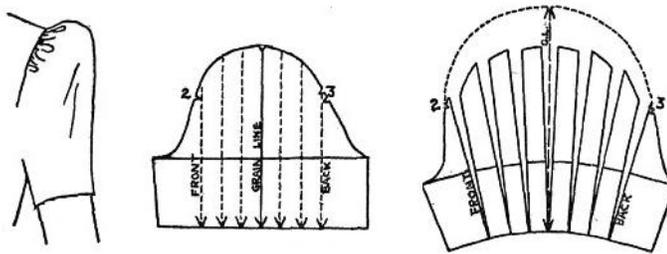
Fig.3.3.5 - Puff Sleeve - Top Gathering

B) **Puff sleeve gathered at hemline only**: - This type of sleeve has no fullness at the upper edge. The bottom edge has fullness in the form of gathers finished with a band or bias binding or using elastic.

Procedure:

    a. Trace the sleeve block.

    b. Draw vertical lines on sleeve block 1" apart. The centre line should be exactly between the two adjacent drawn lines.

    c. Cut right through all slash lines from hemline, near to capline.

    d. Keep the slashed pattern on top of another paper and spread opens the lower edge to get maximum amount of fullness.

    e. Increase sleeve length by 1" or 2" for puffing.

   f. Draw the puff sleeve on the new sheet of paper.
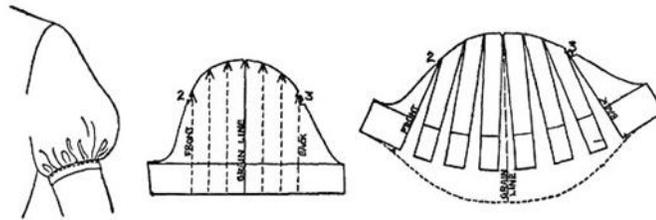
Fig.3.3.6 - Puff Sleeve - Bottom Gathering

C) Puff sleeve gathered at top and bottom :- This type of sleeve has gathers at top as well as bottom. Here the bottom part can be finished with a band, frill or left as such.

Procedure

a. Draw vertical lines on sleeve block 1" apart. The centre line should be exactly between the two adjacent drawn lines.

b. Cut right through all slash lines from hemline to capline.

c. Lay the pieces next to each other on a paper keeping 1" (desired) away from centre piece (Ensure hem is aligned straight while shifting.)

d. Redraw adding 1" to 2" extra length at top and bottom.
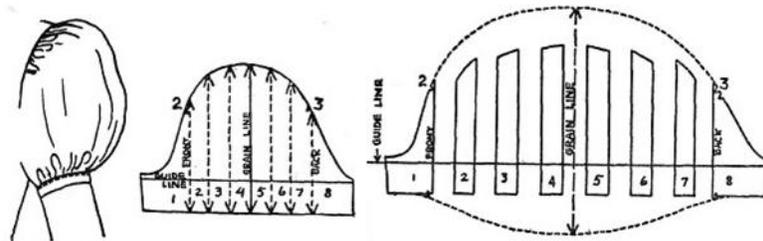
Fig.3.3.7 - Puff Sleeve - Top & Bottom Gathering

3.3.5.2. Bell Sleeve

This is circular hemline sleeve. It resembles a bell in appearance and hence this name is given to the sleeve. The length and flare of the sleeve can be increased or decreased according to one's requirement.

Procedure:

a. Trace the basic sleeve with notches, bicep line, elbow line and centre line.

b. Divide the bicep line into four equal parts. Draw line across the bicep line parallel to centre line. Mark the points X1, X2, X3.

c. Slash the marked lines through X1,X2, X3 up to sleeve cap.

d. Draw a centre line on a paper. Mark the bicep line and elbow line.

e. Place the slashed pattern in accordance with the bicep line and centre line.

f. Spread each slash line at a distance of 1" and fix it with stitch.

g. Draw the outline of the sleeve on both sides.

h. Extend 1"out from sleeve bottom with elbow line as shown in the figure.

i. Redraw the sleeve bottom curve.
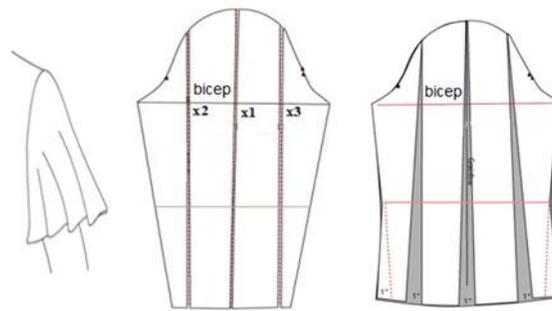
Fig.3.3.8 - Bell Sleeve

3.3.5.3. Cape Sleeve

Cap sleeve is little more than a cap itself, and it does not cover the armhole. Cap sleeve can be constructed in crosswise grain, lengthwise grain and bottom part flared etc. But usually cap sleeve is constructed in crosswise grain.

Procedure:

a. First draft a basic sleeve pattern.

b. Shorten the sleeve by 3/4" from capline and 2" from the bicepsline.

c. Trim ¼ " from each side of under arm.

d. Place the pattern on cross wise (bias grain) with bottom folded.
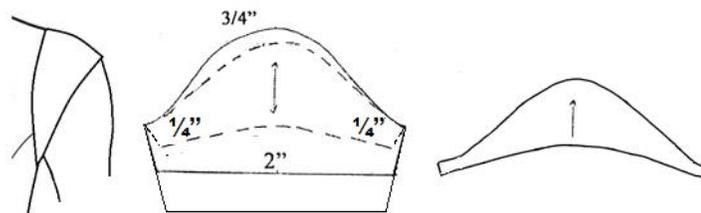

Fig.3.3.9 - Cape Sleeve

3.3.5.4. Petal

A petal sleeve resembles petal of a flower as the sleeve sections cross over each other at the cap and thus the name.

Procedure:

 a. Trace the basic sleeve with desired length.

 b. Mark the point 0 at centre line

 c. $0 - 1 = 0 - 2 = 3\frac{1}{2}"$

 d. $0 - 3 = 5"$

 e. $6 - 6a = 7 - 7a = \frac{1}{2}"$

 f. Join 4 - 6a and 5 - 7a

 g. Draw the petal style lines through 6a, 3, 1, and 7a,3, 2 as shown in the figure.

 h. Trace 1,0,2,4,6a,3,to1 for back petal

 i. Trace 2,0,1,5,7a,3,2 for front petal
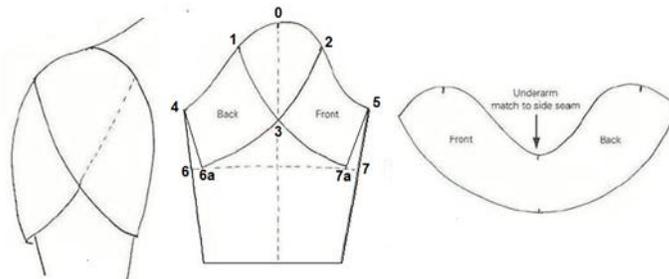
Fig.3.3.10 - Petal Sleeve

3.3.6. SKIRT VARIATIONS

Skirts play a major role in various ladies garments. Changing the silhouette of a skirt is one of the focal point for designers who want to create fashion. The basic skirt hangs straight from waist line to hipline and to hemline. The skirt length varies as in micro, mini, knee length, midi, ballerina, ankle length and floor length.

Micro   Mini   Knee Length   Midi   Ballerina   Ankle Length   Floor Length
(Mid-calf)   (Mid-thigh)
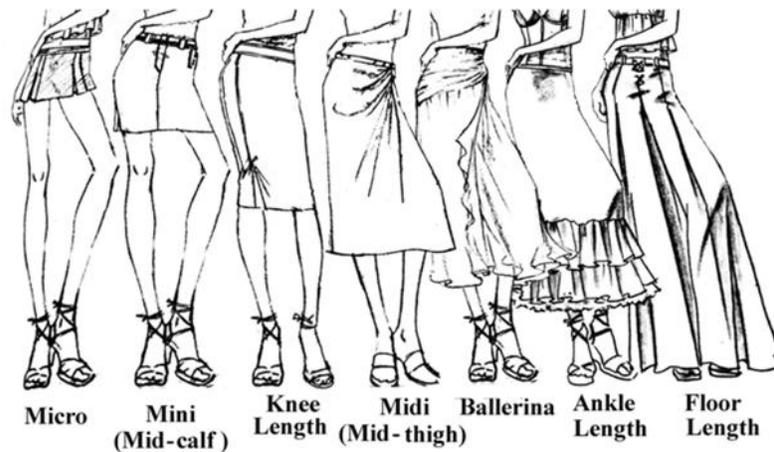
Fig.3.3.11 - Skirts

3.3.6.1. A - line :

It is a casual wear skirt made up of all types of material. An A-line skirt is a skirt that gradually extends outwards from the waist (or hip) towards the hemline, creating a triangular shape (or the shape of an 'A' as the name suggests).

Procedure:

a. Draft a basic skirt block with preferred length and hem allowance.

b. Draw slah line, from the tip of the dart (nearest side seam) down to the hemline.

c. Cut along this line, until 1-2 mm away from the dart point.

d. Cut down the outside dart arm, towards the dart point.

e. Close the waist dart.

f. After closing the dart, opened up the hemline. A and B

g. Label side seam at hem 'X'.

h. $X - Y = \frac{1}{2} AB$

i. Draw a line from Y to the outermost part of the hipline, where the line intersects, label Z.

j. $Z - Y = Z - X$

k. Draw blending line along hem giving the skirt an A-line shape.

l. Repeat steps for back pattern piece.
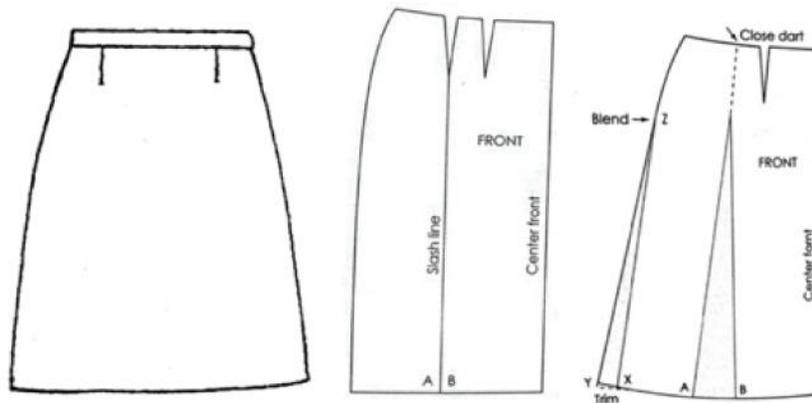
**Fig.3.3.12 - A-Line Skirts**

3.3.6.2. Flare:

A flared skirt has more sweep along its hemline than basic skirt. All of the dart's excess is transferred to the hemline to increase flare. Flared skirts have triangular silhouette. No pleats are used at the waist but hemline has fullness.

Procedure :

    a. Trace front and back basic skirt pattern.

    b. Draw lines from dart points to hemlines parallel with centre lines.

    c. Cut slash lines to (not through) waistline.

    d. Close darts.

    e. Place on paper and spread each hemline sections 5 inches or more.

    f. Trace patterns.

    g. Place front on top of back pattern, matching centre lines.

    h. Measure and divide the difference between the front and back skirt at the side hem.

    i. Add ½ of this amount to front and remove ½ from the back.

    j. Blend side seams to hipline.

    k. Add ½" to ¾" hem allowance.

   l. Blend across hemline.
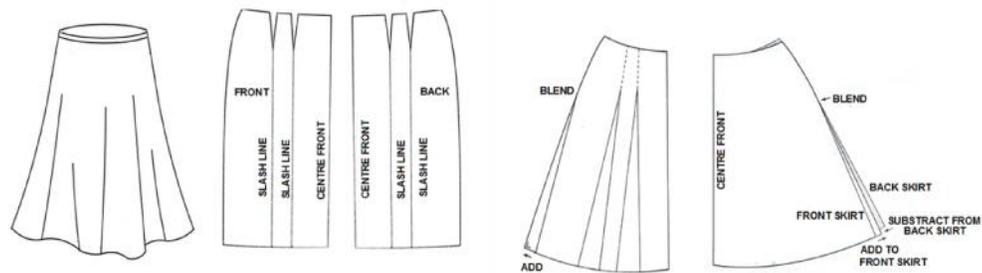
Fig.3.3.13 - Flared Skirts

3.3.6.3. Circular Skirts

It is a flared skirt made of thin material. This skirt is cut on the bias grain. The full circular skirt has no side seam, because it is cut on an angle of 3600. Half circular skirt has side seams. Circular skirt has even fullness all around the waist.

Procedure - 1

a.   From a basic skirt pattern one can create a pattern for circular skirt, without altering the waist measurement.

b.   First close the darts on the skirt pattern. Then make slashes from hemline till near waist line. Spread this slashed pattern evenly and pin /paste it on another sheet of paper as shown in the figure.

c.   Mark the new pattern on the paper.
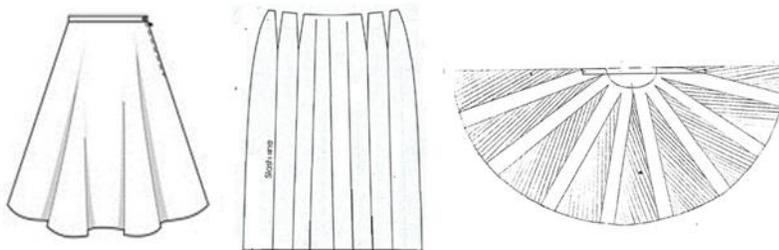
Fig.3.3.14 - Circular Skirts

Procedure - 2

a.   A circle can be divided into four equal parts (1/4, 2/4, 3/4, 4/4) according to the fullness required.

¼   =   Quarter circle

½   =   Half circle

¾   =   Three quarter circle

1   =   Full circle

b. For constructing a circular skirt Full length + 1/6 waist + allowance should be taken and the paper can be folded into four to draw the circular skirt.

c. Corner fold of paper is X

d. X - Y = Radius measurement. (3 7/8"for 26" waist).

e. Y - Z = Skirt length (including hemline)

f. With a push pin, secure the tape measure at X.

g. Allign the tape measure at the fold and place a pencil through the required length on tape (Y - Z).

h. Draw the radius and hemline.

i. Cut the pattern.
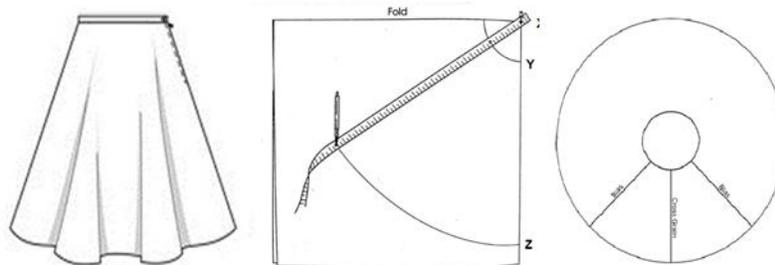
Fig.3.3.15 - Circular Skirts

3.3.7. PATTERN ALTERATION

A comfortable, attractive garment fits properly. It is neither too large nor too small and conforms to the contours of the body without binding, pulling, sagging, straining, or wrinkling. Pattern adjustments and alterations are often necessary to achieve a good fit. Pattern alteration decreases the risk of wastage of expensive fabric and gives a good fit to the garment.

A pattern can be altered and adjusted three ways:

i. By folding out excess fullness to make an area smaller.

ii. By slashing and spreading or overlapping along pattern lines to increase or decrease dimensions.

iii. By redrawing darts or seam lines.

General Guidelines for Pattern alteration:

i.   Place the patterns according to fabric grain.

ii.   The original style of the garment should be preserved.

iii.   Alteration should be made on all related patterns accordingly. For example if back shoulder seam is shortened, the front seam line should also be shortened.

iv.   As far as possible use slash and spread method or slash and fold/overlapping method.

v.   All slashes/folds should be made parallel or perpendicular to the grain line.

vi.   When darts or tucks are used for making a pattern smaller, the width should be half the amount to be removed.

vii.   Where there are darts, make changes between the tip of the dart and the outside edge.

viii.   Maintain ease allowance for comfort.

ix.   Lengthening patterns is done by cutting the pattern apart on the alteration lines and spreading the amount required. Garments can be lengthened by adding to the bottom of the pattern in some cases.

x.   Shortening the pattern is done by folding the pattern along the alteration lines up half the desired amount. Some garments like skirt are also shortened by cutting the pattern off at the desired length.

3.3.7.1. ALTERATIONS OF BODICES

a.   **Large Bust:** Slash across the pattern along bust dart fold line to center front. Slash across the pattern from waist to shoulder along waist dart fold line. Spread the desired amount at center front and bust area. Do not spread at shoulder seam. Redraw seam lines and darts. (New darts will be larger than the original darts. Fig.3.3.16)

b.   **Small Bust:** Slash across the pattern along bust dart foldline to center front. Slash across pattern from waist to shoulder along waist dart foldline. Overlap darts the desired amount to decrease the bust area.

Fig.3.3.16_Alterations for Large Bust

Do not overlap at shoulder seam. (New darts will be smaller than the original darts. Fig.3.3.17)

c. **Gaping Neckline:** Slash from neckline down through bust area to waist. Overlap the desired amount on neck edge; the waistline dart will become larger. Remember to alter the neckline facing and collar patterns to fit the altered neckline. (Fig.3.3.18)


Fig.3.3.17_ Alterations for Small Bust

Fig.3.3.18_ Alterations for Gaping Neckline

d. **Sloping Shoulders:** Redraw shoulder seam and armscye seams, sloping and lowering them the desired amount. Be sure to redraw seams on both front and back pattern pieces. (Fig.3.3.19)

e. **Broad Shoulders:** Slash from midpoint of shoulder down and across to the middle of armscye. Spread pattern the desired amount. Redraw seam from neckline to armscye. Be sure to complete alterations for both bodice front and back. (Fig.3.3.20)


Fig.3.3.19_ Alterations for Sloping Shoulder
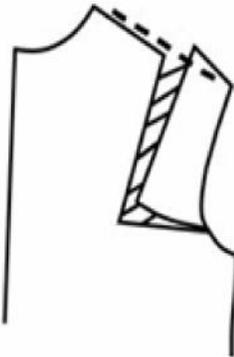
Fig.3.3.20_ Alterations for Broad Shoulders

3.3.7.2. ALTERATIONS OF SLEEVES

a. **Small Arm:** Measure the length of the original seam at the top of the sleeve and record the measurement. On the pattern, fold out the desired amount along a line from top to bottom of sleeve. Redraw lines at hem of sleeve and cap to

make a smooth seam line. Measure the length of the new seam at the top of the sleeve; figure the difference from the original seam. Remove 1/2 the difference from the underarm seams of both the bodice front and back (Fig.3.3.21).

b.   **Large Arm:** Slash sleeve down the center from top to bottom and spread the desired amount. Add 1/2 the amount added to the sleeve to the bodice front and back side seam (Fig.3.3.22).


Fig.3.3.21_Small Arm
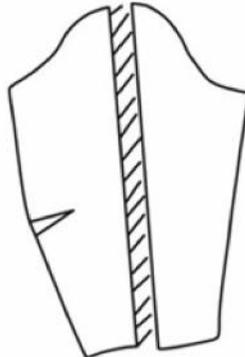
Fig.3.3.22_Large Arm

3.3.8. PATTERN LAYOUT

Pattern layout means the spreading out of each piece of pattern in an arranged manner on fabric for cutting. The proper layout will minimize the wastage of cloth. Following are some rules to remember in pattern layout.

a.   Press the fabric well before layout.

b.   Use large and flat table for laying out and cutting.

c.   For open layout, place the fabric right side up. For all other layouts fold the right side facing and wrong side out.

d.   Choose best way to fold the fabric

Lengthwise centre fold : Most frequently used for all types of garments.

Off centre lengthwise : Used when narrow pieces have to be cut on fold.

Crosswise centre fold: Suitable for materials that are too narrow to accommodate the width of pattern when fold lengthwise.

Double fold: Used when many pattern pieces that are not too wide must be cut on fold.

Combination fold : Lengthwise fold and crosswise fold are combined.

Open layout : The fabric is not folded at all. This is used especially for designs which require right and left halves to be cut separately.

e. Straight grain lines on patterns must be kept parallel to the selvedge.

f. Leave enough space between patterns for cutting outward notches and marking seam allowances.

g. The pattern must be placed in most economic way.

Main pieces must be placed at first.

Wider end of large pieces should be placed at the cut edges.

Lay the pattern pieces close together.

Fit pieces similar in shape next to each other (dovetailing)

h. Take care to use special layouts for asymmetric designs and for fabric for special designs, stripes or checked deigns.

3.3.9. PRACTICALS

1. Dart Manipulation

Prepare patterns of dart manipulation for different bodice darts.

2. Drafting Stylelines

Prepare a pattern of princess armhole style line in bodice.

3. Sleeve Variations

Prepare patterns of

a. Puff sleeve - Top gathering

b. Puff sleeve - Bottom gathering

c. Puff sleeve - Top and bottom gathering

d. Bell sleeve

e. Cape sleeve

f. Petal sleeve

4. Skirt Variation.

   Prepare patterns of

   a. A - Line Skirt

   b. Flared Skirt

   c. Circular Skirt

   5. Pattern Alterations

Make alterations in basic patterns for

   a. Large bust
   b. Small Bust
   c. Gaping neckline
   d. Sloping Shoulder
   e. Broad Shoulders
   f. Large Sleeve
   g. Small Sleeve

3.3.10. ASSESSMENT ACTIVITIES

1. Assignment

2. Seminar

3. Practical activity

4. Work diary

5. Class Test

6. Portfolio

3.3.11. TE QUESTIONS

1. With the help of illustration, describe the two methods of manipulating darts.

2. Illustrate the converting of the centre waist dart to French dart.

3. Draft different puff sleeves.

4. Discuss the slash and fold methods of pattern alteration used in garment designing.

5. Your friend approaches you to learn about cutting garments with minimal wastage of cloth. Explain to him the method of laying out.

UNIT - 3.4
CONSTRUCTION OF HOUSEHOLD TEXTILES

3.4.1.   INTRODUCTION

Household textile is a big industry which is equally promising as garment industry. Changes in fashion trends also affects household textiles sector. The design, colour, ornamentation, cloth types and stitching styles also keep changing. Household textiles or home furnishing include a wide range of products from bed linen, bathroom furnishing, kitchen linen, table linen to curtains, window treatments, hammocks, carpets and rugs. This unit gives some basic knowledge about the types of household textiles and their use. This unit also deals with the of construction of pillow cover and apron and also the proper selection, construction and ornamentation of these household textiles.

3.4.2.   LEARNING OUTCOMES

The learner;

- Identifies the different types of household textiles.

- Identifies and analyze the use of different fabric for household textiles.

- Chooses suitable materials for household textiles.

- Drafts pillow cover with standard measurements.

- Constructs pillow cover with surface ornamentation.

- Drafts an apron with standard measurements.

- Constructs apron with patch pocket and surface ornamentation.

3.4.3. HOUSEHOLD TEXTILES

Home textile is a branch of textiles comprising of textiles used for household purposes. It consists of a various range of functional as well as decorative products used mainly for decorating our houses. The fabrics used for home textiles consist of both natural and man-made fibers. Sometimes we also blend these fibers to make the fabrics stronger. Generally, home textiles are produced by weaving, knitting, crocheting, knotting, or pressing fibers together.

3.4.4. TYPES AND USE OF HOUSEHOLD TEXTILES

Different types of household textiles include

3.4.4.1. Bed Linen:

This group comprises of items such as bedcovering, bed throw, bed skirt, pillow covers, cushion covers etc Sheets and pillowcases are generally related to fabrics woven with a plain weave of cotton, or more often, cotton / polyester blended yarns or linen. Sheets are made in two types: flat and fitted. Both types are made to fit five typical size mattresses: crib, twin, full or double, queen, and king. Pillowcases are generally produced in sizes to fit pillows of standard, queen and king size. Common materials used to create bed sheets include cotton, linen, satin, silk, rayon, bamboo fiber, polypropylene spun bond, and blends of cotton with polyester.

3.4.4.2. Bathroom Furnishings:

Include bath mats and bath towels. Terry towels are divided by size into five groups, guest, hand, bath, extra large, and beach. Terry towels are made either of all-cotton, or a combination of cotton and polyester. While polyester provides increased strength, lighter weight, faster drying after laundering and less shrinkage, all-cotton towels provide greater absorbency. Towels must be strong enough to withstand the strain of the rubbing and pulling, twisting and tugging of the user, and of constant laundering.

3.4.4.3. Kitchen Linen:

These include aprons, dishcloths, kitchen gloves etc. A dishcloth is used in the kitchen to clean dishes and other surfaces. Typically they are made of cotton or other cloth, such as microfiber, and measure 11" to 13 inches square. An apron is a garment designed to be a protective layer that covers the front of the body.

3.4.4.4. Table Linen:

Table cloth, chair covers and chair mats are together referred to as table linens. Table cloths are generally made of cotton, linen, rayon, polyester, or blends of any combination of these fibres. They are produced in various ways, designs, and patterns. Among the most popular are damask and lace constructions. Cotton tablecloths are easy to care, available in a wide range of colours, patterns, casual prints and sizes. Linen is relatively easy to take care of, since it resists dirt and stains. With a little forethought linen care, linen tablecloths will last the lifetime. Silk and organza are more expensive tablecloths, but they offer a more luxurious appearance and a number of formal style options. Polyester based satin tablecloths are more common because while they are just as beautiful as silk ones, they are also less expensive, more durable, and machine washable. Plastic tablecloths have little elegance and no real reusability factor since they are easily torn and stained.

3.4.4.5. Curtains:

Curtains are very common in households. Curtains with large designs are fit for use in small rooms. Narrow windows may be mark to appear broad by the use of suitable curtains. Pale blue and green will give a cool effect. A curtain is usually hung by inserting the curtain rod or spring from first to last the casing stitched on its top hem. Draperies are made with pleated materials and are attached to the rod by hooks and rings so that they can be drawn open or closed easily. Linen is a natural fiber used by manufacturers in the design of curtains due to its airy and spacious appeal, a fantastic asset in a room on a breezy summer's day. Linen mixtures of cotton, nylon and linen itself are also used. A luxurious and elegant look can be achieved in a room if large silk curtains grace the window. However, they can be on the expensive side and may also not withstand direct and constant exposure to sunlight. Lighter curtains may provoke a subtle and airy appearance, adding to the casual appearance of a room and are generally more affordable for the average homemaker. More formal areas of a house suit heavier curtain fabrics.

3.4.4.6. Rugs and Carpets:

Rugs and carpets are the best floor coverings; they add charm to the flooring and provide colour and pattern to the home. Wall to wall carpet will help to make the room appear larger. It will promote a feeling of luxury and formality as well as serenity and quiet. Carpet minimize, or eliminate noise problems, that is they can absorb noise [voices, music, sound of appliances and so on] and also floor surface noise. [Foot steps]. A carpet is a textile floor typically having wall to wall length. Traditionally these are made from wool, but, since the 20th century, synthetic fibres such as polypropylene, nylon or polyester are often used, as these fibres are less expensive than wool.

"Carpet" can be applied to a floor covering that covers an entire house, whereas a "rug" is generally smaller for a single room. Rugs are flow mats, usually smaller than carpet. Rugs are more easily handled and cleaned. They can be shifted to different rooms and also in different house. A room size rug is one that comes with in 12" or less from walls on all size. An area rug is smaller rug used to define a certain area. In a large room, rug may be used to separate different activities like reading, eating etc. Scattered rug is a very small rug used to complement a room feature in front of bed, dressing table etc. usually rugs have definite color and pattern. Rugs are the perfect accessory to add texture, softness and warmth to any room.

3.4.5. CONSTRUCTION OF PILLOW COVER

Pillows add color, pattern and texture to a room. They soften hard edges of furniture and create a much warmer space. They can be elegant or just plain fun. Pillow cases are generally produced in sizes to fit pillows of standard, queen and king size. Pillow covers are a quick, easy and inexpensive sewing project.

a. Specifications:

Standard Size

Surface ornamentation with embroidery / printing / fabric painting.

b. Materials required:

Cotton plain cloth -   1.20 mts. (36" width)

Matching thread

Materials for surface ornamentation

Drafting, Cutting & Stitching Tools

c. Measurements:

Standard size of pillow   :   20"x 26"

d. Drafting Procedure:

Part I	=	Full dimension ABCD
Length	=	26"+1½"+1½" (for 2 flap width) + 1"seam allowance
Part II	=	CDEF
Length	=	20"+ 1½" (for 1flap) +1" seam allowance
Part III	=	ABGH

Length   =   6''+3'' (for under lapping) +1½" (for 1 flap)   +1''seam allowance

Width   =   20"+1½" +1½" (for 2 flap width) +1'' for seam allowance. (The width of the material required   for construction of all pieces of pillow cover is the same).
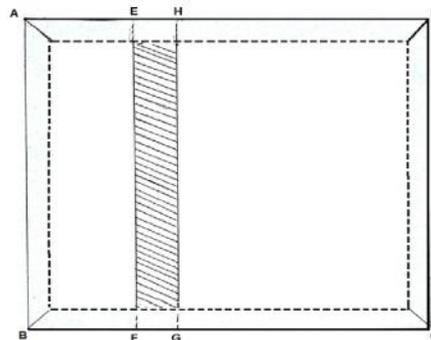

Fig.3.4.1 - Pillow Cover - Draft

e. Pattern Making:

Prepare paper patterns.
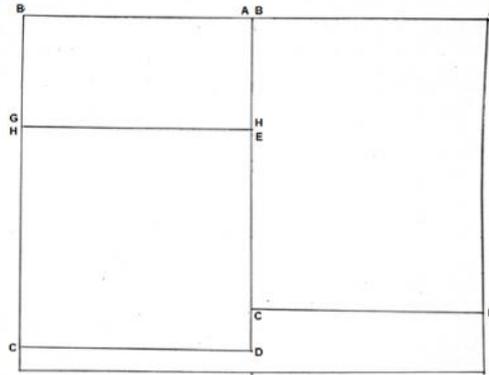
f. Layout:

Fig.3.4.2 - Pillow Cover - Layout

g. Estimation of Cloth:

Width of cloth   =   36"

Amount of cloth required   = (2 x width of pillow cover) + (4 x flap width) + seam allowance

= (2 x 20) + (4 x 1½) + 2

= 48"

= 1.20 mts.

h. Construction Details:

1) Place Ist part ABCD on table.

2) Place overlapping flap CDEF on top of ABCD.

3) On top of that place III rd part ABGH such that overlapping occurs only over a small area of 3".

4) Make a row of stitches along the dotted line, so that a flap is formed on all sides of the pillow cover. All these are arranged on wrong side, so that after making a row of stitches, when turned over to the right side, the pillow cover has CDEF overlapping over ABGH.

5) Finish the raw edges of the pillow cover using overcast stitch, button hole stitch, lace, piping or binding.

3.4.6. CONSTRUCTION OF APRON

An apron is a garment that protects the body or clothing from damage or stains. It is derived from the French word "naperon," which means napkin or small tablecloth. A comfortable apron in a washable fabric with pockets is recommended since it contacts many types of materials over the course of the day. Aprons can be made in a number of colours and prints so they fit with other clothing. Aprons can be solid, printed, colourful, drab, personalized, monogrammed, embroidered, embellished, and altered. Pockets, trim, or ruffles can be added to make the apron unique or more feminine. Embroidery can be used to monogram a name or title so the wearer is easily identified on the job. Since aprons have a variety of uses in domestic or commercial environments, they can be made from many different materials.

a. Specifications:

Surface ornamentation with embroidery / painting

Patch Pocket

b. Materials required:

Cotton plain / printed cloth   -   1.20 mts. (36" width)

Matching thread

Cloth for piping

Materials for surface ornamentation

Drafting, Cutting & Stitching Tools

c. Measurements:

Full length   -   32"

Chest   -   32"

Shoulder   -   14"

d. Drafting Procedure:

0 - 1   =   Full length + 1 ½ "

0 - 2   =   ¼ Chest

2 - 3   =   ¼ Chest + 1"

4 is squared down from 3

0 - 5   =   1/12 Chest

0 - 6   =   1/12 Chest + ½"

Join 5 - 6 with a smooth curve.

0 - 7   =   ½ Shoulder - 2 ½ "

8 is squared down from 7

8 - 9   =   2 ½ "

Shape armhole 7 - 9 - 3

4 - 10   =   1½ "

10 - 11   =   1½ "

Shape bottom 1 - 11

Join 3 - 11

Mark 2" below 3 for strap placement

Pocket

2 - 12   =   4"

12 - 13   =   4"

12 - 14   =   3"

13 - 5   =   2 ½"

Join 12 - 14 - 15 - 13

Waist Strap (2 piece)

Width - 5"

Length - 22"

Neck Strap(2 pieces)

Width - 5"

Length - 15"

Fig.3.4.3- Apron - Drafting

e. Pattern making:

Prepare paper patterns.

f. Layout:

Fig.3.4.4 - Apron - Layout

g. Estimation of Cloth:

Width of cloth   =   36"

Amount of cloth required =   Length of apron + (2 x seam allowance)

                                =   32 + (2 x 2)

                                =   36"

                                =   90 cm.

h. Construction Details:

Cut bias strips of 2" width and finish the edges with bias binding all over.

Make a patch pocket of any shape and finish with bias binding on top.

Attach pocket.

Attach neck belt.

Attach side belt.

3.4.7. PRACTICALS

1. Draft and Construct a Pillow Cover

 Draft and construct a pillow cover with standard measurements. Decorate it with embroidery / fabric painting.

2. Draft and Construct an Apron

 Draft and construct an apron with standard measurements. Decorate it with embroidery / fabric painting.

3.4.8. ASSESSMENT ACTIVITIES

1	Assignment	2	Seminar
3	Practical activity	4	Work diary
5	Class Test	6	Portfolio

3.4.9. TE QUESTIONS

1. Prepare a seminar report on the household textiles and their use.

2. Suggest suitable fabrics for Kitchen linens with reason.

3. Discuss Curtains with regard to different fabric suitable for its construction.

4. Draft an apron for an housewife with standard measurements.

UNIT - 3.5
CONSTRUCTION OF CHILDREN'S AND LADIES' GARMENTS

3.5.1.   INTRODUCTION

A good fashion designer should master stitching skills to do well in his/her career. Hence this chapter concentrates on construction of ladies' and kid's garments. All steps from taking measurement, drafting, pattern making, layout and construction of different ladies and kids garments like, A-line frock, Salwar, and Kameez have been included for learners to construct dresses on their own. These unit gives importance to custom tailoring.

3.5.2. LEARNING OUTCOMES

The learner;

- Lists the standard measurements for an A-line dress.

- Drafts an A-line dress.

- Develops paper pattern for an A-line dress.

- Layouts the pattern with minimum wastage of cloth.

- Constructs an A-line dress.

- Lists the standard measurements for a salwar.

- Drafts a salwar.

- Develops paper pattern for a salwar.

- Layouts the pattern with minimum wastage of cloth.

- Constructs a salwar.

- Lists the standard measurements for a kameez.

- Drafts a kameez.

- Develops paper pattern for a kameez.

- Layouts the pattern with minimum wastage of cloth.

- Constructs a kameez.

3.5.3. CONSTRUCTION OF A - LINE FROCK

a. Specifications:

Peterpan Collar

One piece placket with hook and eye

Cape sleeve

b. Materials required:

Printed cotton cloth   -   1.20 mts

Matching thread

Accessories   -   Lace, show button, hook & eye.

Drafting and stitching tools.

c. Measurements:

Chest	:	60 cm
Full length	:	56 cm
Shoulder	:	25 cm
Sleave length	:	10 cm

d. Drafting Procedure:

Front Part

0 - 1	=	Full length + 1 ½ cm
0 - 2	=	¼ Chest + 1 ½ cm
2 - 3	=	¼ Chest + 4 cm
1 - 4	=	¼ Chest + 10 cm

Join 3 - 4.

0 - 5	=	½ Shoulder + 1cm.

6 is squared down from 5.

0 - 7	=	1/12 Chest + 1cm.
0 - 8	=	1/12 Chest + 2.5 cm
5 - 9	=	1.5 cm
6 - 10	=	2.5 cm

Join 7 - 9 and shape the front arm hole from 9 - 10 - 3.

4 - 11   =   1.5 cm

Shape bottom 1 to 11 as shown.

Back Part

0 - 12   =   2.5 cm.

Shape the back neck 7 - 12.

10 - 13   =   1.25 cm

Shape the back armhole 9 - 13 - 3.

Length of opening at centre back =   ¼ chest from 12.

Collar

0 - 1	=	1/12 chest + 2.5 cm
0 - 2	=	1/12 chest + 1 cm.
0 - 3	=	2.5 cm
1 - 4	=	6.5 cm
2 - 5	=	5.5 cm
3 - 6	=	5.0 cm
4 - 7	=	2.5 cm
6-8	=	2.5 cm

Sleeve

0 - 1   =   Sleeve Length,
0 - 2   =   Chest/4 - 2 cm
     Now square down from 2 to 3 and
     complete the block.
2 - 4   =   Chest / 8 - 1 ½ cm
3 - 5   =   2 cm
Complete the curve 0 - 4
Join 4 - 5
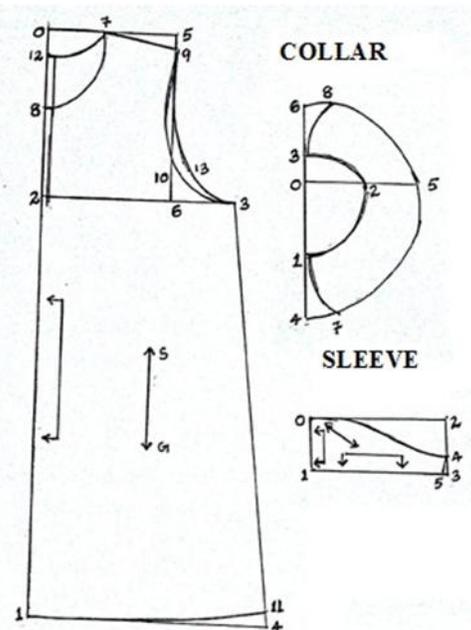
Fig.3.5.1 - A-Line frock - Draft

e. Pattern making:

Prepare paper patterns

f. Layout:

I – Front Bodice   V – Placket
II – Back Bodice   VI – Cross Pieces
III – Collar   VII – Balance
IV – Sleeve
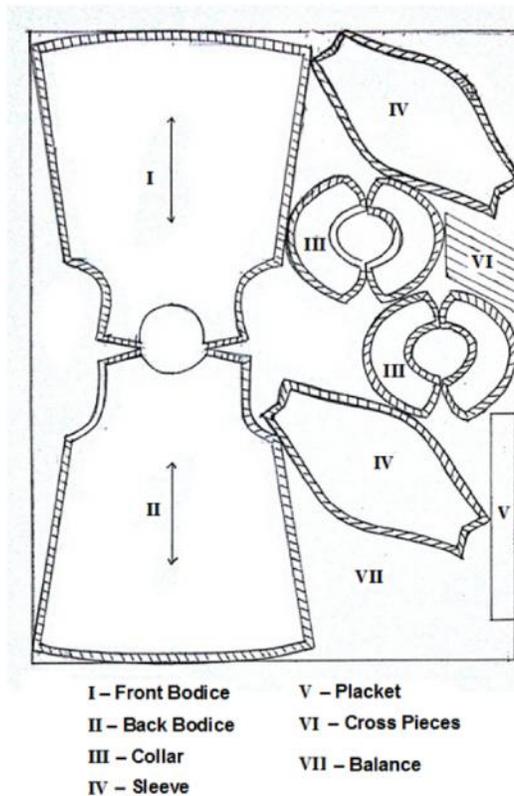
Fig.3.5.2 - A-Line frock - Layout

g. Estimation of Cloth:

Width of the cloth	=	36" (90 cm)
Amount of cloth required allowance	=	2 x bodice length + seam
	=	2 x 56 + 4
	=	120 cm

h. Construction Details:

Join shoulder.

Finish back opening with a continuous bound placket.

Prepare peter pan collar and attach the collar to the bodice.

Finish neckline with piping.

Attach cape sleeve.

Join sides.

Finish bottom.

3.5.4. CONSTRUCTION OF SALWAR

Salwar is a garment used with kameez or kurta. It is prepared with a casing at the waist for inserting a cloth tape. A canvas or interfacing material is used in the inturns at the bottom with any suitable design

a. Specifications:

Pleated bottom

b. Materials required:

Plain cotton cloth	-	2.00 mts
Matching thread		
Accessories	-	Canvas.
Drafting and stitching tools.		

c. Measurements:

Full length	:	38"
Seat	:	34"
Waist	:	38"
Bottom round	:	13"

d. Drafting Procedure:

Waist Piece

0 - 1	=	1/6 Seat + 1"
0 - 2	=	¼ Waist + 2 ½ "
1 - 3	=	03

Leg Piece

4 - 5	=	Full length - (0 -1) (length of waist piece)
4 - 6	=	½ seat + 1"
6 - 8	=	1/6 seat +1"
7 - 8	=	2"
5 - 9	=	½ bottom + ½ "

Join 8 - 9

Shape at 7.
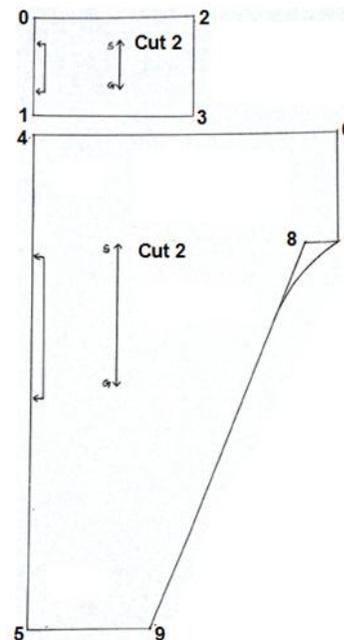
Fig.3.5.3 - Salwar - Draft

e. Pattern making:

Prepare paper patterns

f. Layout:

| I – Leg Piece | III – Cloth Tape |
| II – Waist Piece | IV – Bottom leg in turning piece |
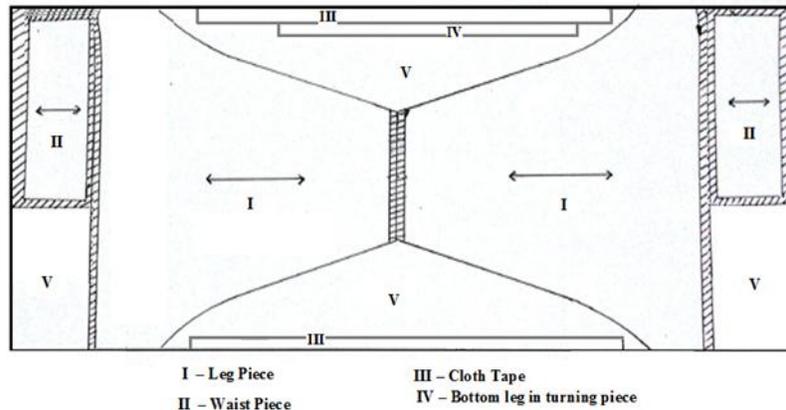
Fig.3.5.4 - Salwar - Layout

g. Estimation of Cloth:

Width of the cloth	=	36" (90 cm)
Amount of cloth required allowance	=	(2 x full length) + seam
	=	(2 x 38) + 4
	=	80"
	=	2.00 mts.

h. Construction Details:

Join separate inturns at the bottom of the leg piece and stiffen using several rows of stitches at the bottom.

Take gathers at the leg part so as to make it equal in width to the waist piece .

Join the leg part to the waist piece.

Make in turns in the front part of the waist piece.

Join the leg seam of both left & right sides. Prepare the two legs separately.

Join the upper part of the two legs as usual.

Prepare facing at the top and insert a cloth tape.

3.5.5. CONSTRUCTION OF KAMEEZ

Kameez is the traditional women's wear of India. It is accepted because of its convenience and is used by all age groups. It can be used as a casual wear as well as a party wear when embellished. Changes are commonly made at the necklines and sleeves. It is worn along with salwar or churidar.

a. Specifications:

Short Sleeve

Neckline   -   Shaped facing

Slit

b. Materials required:

Printed / plain cotton cloth   -   2.15 mts

Matching thread

Drafting and stitching tools.

c. Measurements:

Full length	:	36"
Bust / Chest	:	32"
Waist length	:	14"
Shoulder	:	14"
Waist	:	28"
Seat	:	36"
Sleeve length	:	6"
Sleeve bottom	:	11"
Shoulder to slit	:	20"
(Abdomen Length)		

d. Drafting Procedure:

Front Part

0 - 1	=	Full length + 1 ½"
0 - 2	=	¼ Bust - 1 "

0 - 3	=	Waist length
0 - 4	=	20" (Shoulder to Seat line)
0 - 5	=	½ Shoulder + ¼ "

6 is squared down from 5.

2 - 7	=	¼ Bust + 1 ½ "(1"for seam allowance and ½ " for loose)
3 - 8	=	¼ Waist round + 1 ½ "
4 - 9	=	¼ Seat round + 1 ½ "
1 - 10	=	(4 - 9) + 2" (1" for loose and 1"for seam allowance)
10 - 11	=	½ "

Shape 1 - 11.

9 - 11	=	slit
0 - 13	=	1/12 Bust
0 - 14	=	1/6 Bust

Shape the front neck as shown.

5 - 15	=	¼ " (Shoulder slope)

Join 13 - 15

6 - 16	=	1 ½ "

Shape the front arm hole 15 - 16 - 7.

Back Part

0 - 17	=	3"

Shape back neck 13 - 17

16 - 18	=	¾ "

Shape the armhole 15 - 18 - 7

Sleeve

0 - 1	=	Sleeve Length

1 - 2	= 1 ½ " for turning
0 - 3	= ¼ bust- 1"
2 - 4	= 0 - 3
3 - 5	= 1/8 bust - ½ "
0 - 6	= 1 "
5 - 7	= 1/3 of 0 - 5

Shape the front and back armhole as shown.

1 - 8	= ½ Sleeve bottom + ½ "

e. Pattern making:

Prepare patterns
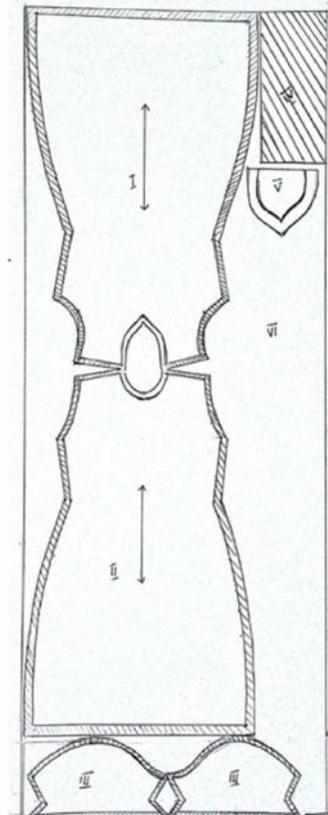
f. Layout:

Fig.3.5.5 - Kameez - Draft

Fig.3.5.6 - Kameez - Layout

g. Estimation of Cloth:

Width of the cloth   =   36" (90 cm)

Amount of cloth required =   2 x bodice length + sleeve length + seam allowance.

                         =   2 x 37 ½ + 7 ½ + 3 ½

                         =   86" = 2.15 mts.

h. Construction Details:

Apply shaped facing on front & back neckline using canvas.

Join front & back shoulder seam.

Join side seam up to the slit

Attach sleeve to bodice

Finish Slits & bottom with machine stitch, hemming or bias binding.

Stitching Sleeve

Turn over the bottom of the sleeve & make a row of stitches.

Join side seam.

Place the notch over the line joining the shoulder seam & join the sleeve to the bodice.

3.5.6. PRACTICALS

1. Construction of A - Line Frock

    Draft, make paper pattern and construct an A-Line frock with standard measurements.

2. Construction of Salwar

    Draft, make paper pattern and construct a salwar with standard measurements.

3. Construction of Kameez

    Draft, make paper pattern and construct a Kameez with standard measurements.

3.5.7. ASSESSMENT ACTIVITIES

Assignment   Practical activity

Work diary   Class Test

Portfolio

3.5.8. TE QUESTIONS

1. List the standard measurements for an A- Line frock
2. Using the standard measurements draft an A-Line frock.
3. Draft and draw a Layout for a Salwar
4. Draft and draw a Layout for a Kameez

UNIT - 3.6
CONSTRUCTION OF GENTS' GARMENTS

3.6.1.   INTRODUCTION

Construction of gents' garments like Kurtha and shirt, using all steps, like taking measurement, drafting, pattern making, layout and construction gives a chance to master the learners construction skills. The learners will understand the basic differences in the construction of ladies and gents garments.

3.6.2. LEARNING OUTCOMES

The learner;

- Lists the standard measurements for a Shirt.

- Drafts a Shirt.

- Develops paper pattern for a Shirt.

- Layouts the pattern with minimum wastage of cloth.

- Constructs a Shirt.

- Understands the standard measurements for a kurtha.

- Drafts a kurtha.

- Develops paper pattern for a kurtha.

- Layouts the pattern with minimum wastage of cloth.

- Constructs a kurtha.

3.6.3. CONSTRUCTION OF SHIRT

Shirt is a unisex garment which covers the upper torso of body. The major difference between ladies' and gent's shirt is the difference in placket placement. For gent's shirt the buttonhole placket is placed left over right. Whereas in ladies' shirt it is right over left. Parts of a shirt are:

Main bodices	Collar band and Collar
Pocket	Sleeve and Sleeve placket
Placket	Back yoke
Cuff	

a. Specifications:

Men's shirt with collar

Full sleeve with Cuff

b. Materials required:

Cotton cloth	-	2.10 mts
Matching thread		
Accessories	-	Buckram / Canvas, Buttons
Drafting and stitching tools		

c. Measurements:

Bodice

Centre back length	=	29"
Chest	=	36"
Across shoulder	=	17"
Neck round	=	15 ¾"
Arm hole	=	21 ½"
Yoke height	=	3 ¾ "

Collar

Neck Round	=	15 ?"
Collar Height at CB	=	1 ¾ "
Collar Point	=	2 ¾ "

Collar band

Neck Round	=	15 ?"
Collar band height	=	1 ¾ "

Sleeve

Sleeve length	=	21 ½ "
Wrist round	=	11"
Sleeve armhole	=	21 ½ "
Slit length	=	5"

Cuff

Cuff height	=	2 ¾ "
Wrist round	=	9 ½ "

Sleeve Placket (Small and Big)

Sleeve placket opening	=	5"
Bigger placket width	=	1"

Small placket width	=	½ "

Pocket

Pocket height/length	=	5 ½ "
Pocket width	=	5"
Pocket length at side	=	4 ¾ "

d. Drafting Procedure:

Front And Back Shirt

0 - 1	=	shirt length
0 - 2	=	½ chest + 4"
3 is squared down from 2		
0 - 4	=	¼ chest + 2"
4 - 2	=	0 - 4
5 is squared down from 4		
0 - 6	=	$\frac{1}{4}$ chest + 1½"
0 - 6	=	4-7= 2 - 8
5 - 9	=	8"
6 - 9	=	7 - 10 = 8 - 11
0 - 12	=	½ shoulder
13 is squared down from 12		
2 - 14	=	½ shoulder
15 is squared down from14		
2 - 14	=	8 - 15
0 - 16	=	1/6 neck round + 3/8"
16 - 17	=	¾ "
Shape 0 - 17		
2 - 18	=	1/6 neck round + 3/16"
2 - 19	=	1/6 neck round + ½"

Shape 18-19

4 - 20	=	1 ½"

4 - 21   =   1 3/4 "

Join 17 - 20 and mark the intersecting point on the line 12 - 13 as a

Join 18-21 and mark the intersecting point on the line 14 - 15 as b

a1 is the midpoint of a - 13

b1 is the midpoint of b - 15

Shape a - a1 - 7 (back scye)

b1 - b2   =   3/8"

Shape b - b2 - 7(front scye)

0 - 22   =   3 ¾ "(yoke height)

0 - 22   =   12 - 23

Note

1. Show all the base lines as broken lines. Apply required information.

2. Balancing of front and back is required.

3. Place front and back meeting shoulder lines together. Measure ¾" in on shoulder line of front, mark a line and cut the same, attach the same to back shoulder line.
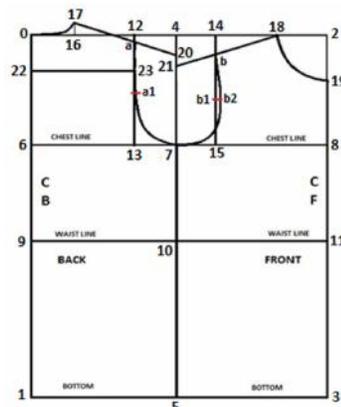
Fig.3.6.1-Shirt Bodice

Collar

Square down and square across from zero.

0 - 1   =   Collar height at CB.

0 - 2   =   ½ Neck round

Square down to 3 and complete the block.

4 is the mid of 0 - 2

5 in the mid of 1 - 3

Measure ?" down from 3 and mark the point 'a'

Measure ?" from the point 2 and mark 'b'

Join 'a' to 'b' and extend the line.

a - c   =   Collar point

Join 5 to a and 4 to c as curve to complete the pattern.

Collar Band

Square across and square down from zero.

0 - 1   =   Collar band height at CB

0 - 2   =   ½ Neck round + ¾"(button extension)

Square down to 3 and complete the block.

4 is the mid of 0 - 2

5 is the mid of 1 - 3

2 - 2a = 3 - 3a = ¾ " (button extension)

3 - 3b = 2"

2 - 2b = 5/8"

From 3b mark ¼" down 3c

Join 2a - 3a with dotted line

Join 5,3c & 3

Join 4 ,2b & 3
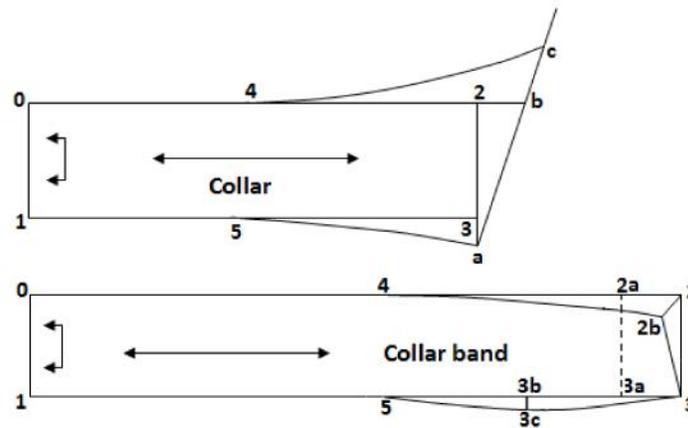
Fig.3.6.2_Shirt Collar

Sleeve

0 - 1	=	Sleeve length
0 - 2	=	¼ chest - 1"

3 is squared down from 2

0 - 4	=	1/8 chest
2 - 5	=	0 - 4

Join 0 - 5

6 is midpoint of 0 - 5

7 is midpoint of 0 - 6

8 is midpoint of 6 - 5

6 - 9	=	¾ " (upward at 90 degree angle)
7 - 10	=	5/8" (upward at 90 degree angle)
8 - 11	=	¼ " (downwards at 90 degree angle)

Shape 0 - 10 - 9 - 5 with a smooth curve (back shape)

Shape 0 - 10 - 11 - 5 with a smooth curve (front shape)

1 - 12	=	½ sleeve bottom

Note

Calculation for sleeve bottom:

Sleeve bottom + pleat allowance - placket width + overlapping allowance + 2 seam allowance

Join 5 - 12 and extend 13(5/8")

14 is midpoint of 1 - 13

14 - 15 $\qquad$ = $\qquad$ Slit length -3/8" upward from 14
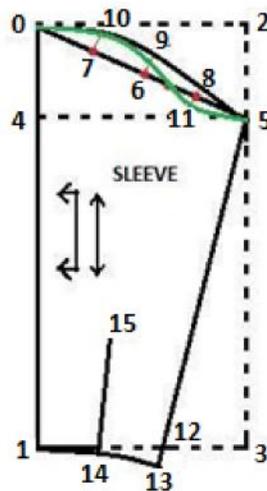
Fig.3.6.3_Shirt Sleeve

Cuff

0 - 1	=	2 ¾ "
0 - 2	=	sleeve bottom + overlapping allowance (2")

3 is squared down from 2

3 - 4	=	¾ "
3 - 5	=	¾ " (upward)

Join 4-5 for cuff shape.

Sleeve Placket (Small and Big)

Small

0 - 1	=	5" + ¾ "(seam allowance)
0 - 2	=	½ " +1 ¾ "(folding allowance)

0 - 1   =   2-3

0 - 2   =   1-3

Big

0 - 1   =   5"+2   ¼ " (placket extension and seam allowance)

0 - 2   =   1"+2   ¾ " (folding allowance)

0 - 1   =   2 - 3

0 - 2   =   1 - 3

0 - 4   =   1 ½ "

0 - 5   =   ½ "

6 is squared down from 5
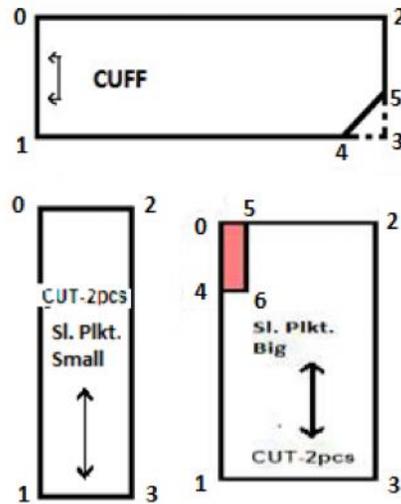
**Fig.3.6.4_Shirt Cuff &
Sleeve Placeket**

Pocket

0 - 1   =   5 ½ "

0 - 2   =   5"

3 is squared down from 2

0 - 1   =   2 - 3

0 - 2   =   1 - 3

1 - 4   =   3 - 5   = ¾ "

6 is the midpoint of 1-3

Join 4-6-5
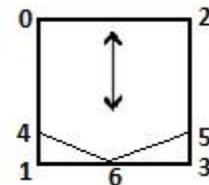
Fig.3.6.5_Shirt Pocket

Add 3/8" seam allowance at sides and bottom and 13/8''' at pocket mouth.

Note:

Position of Pocket:

Pocket placement from placket   =   3"

Pocket placement from high point shoulder   =   9"

I.   Front bodice
II.   Back bodice
III.   Sleeve
IV.   Sleeve Placket
V.   Cuff
VI.   Collar
VII.   Collar band
VIII.   Yoke
IX.   Pocket
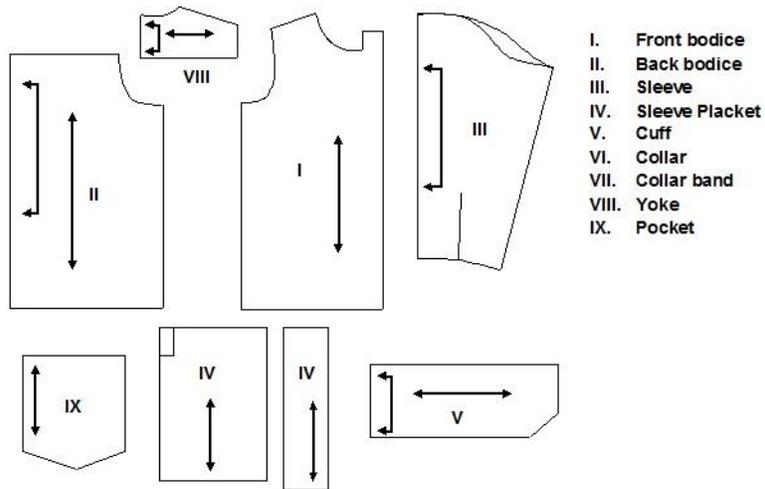
Fig.3.6.1_Shirt_Draft

e. Pattern making:

Prepare paper patterns
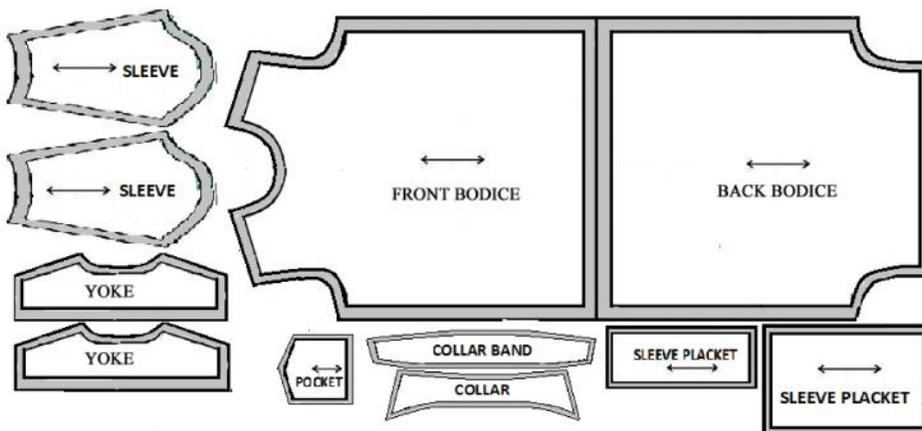
f. Layout:

Fig.3.6.6_Shirt _Layout

g. Estimation of Cloth:

Width of the cloth $=$ 36" (90 cm)

Amount of cloth required $=$ (2 x full length) + seam allowance + sleeve length

$=$ (2 x 29) + 4 + 24

$=$ 84"

$=$ 2.10 mts

h. Construction Details:

Front

Sew front pocket

Sew right opening and attach label

Sew pocket mouth

Press pocket

Attach pocket

Sew buttonhole placket x 6

Sew button x 6 + 2spare button

Bartack at pocket mouth x 2

Back

Sew label at back yoke

Sew pleats x 2

Attach yoke to back

Sleeve

Press sleeve placket x 2

Sew under slits x 2

Attach sleeve placket x 2

Sew buttonhole sleeve placket

Sew button at under slits

Cuff

Fuse to cuffs

Trim and run stitch of cuff

Topstitch cuffs ¼"

Sew buttonhole cuff x 2

Collar

Fuse to upper collar

Run stitch collar

Cut collar edges

Trim collar and turn collar

Press collar

Topstitch collar ¼"

Cut collar hem

Fuse collar band

Topstitch collar band

Cut collar band edge

Attach upper collar with collar band

Trim collar band

Press collar band

Topstitch collar band 1/16"

Trim collar band bottom

Mark point (neckline)

Sew buttonhole x 1

Sew button x 1

Assembling

Join shoulder

Attach sleeve opening pleats x 2

Attach sleeve x 2

Topstitch sleeve x 2

Join side seam

Attach cuff x 2

Attach and close collar

Sew bottom

3.6.4. CONSTRUCTION OF KURTHA

Kurtha is generally worn with Pajama or dhoti. The neckline is finished with a bound hem or stand up collar. Slit is kept at both the side seams.

a. Specifications:

Stand up collar

Side slit

Tailed placket

Patch pocket

b. Materials required:

Cotton cloth   -   2.40 mts

Matching thread

Accessories   -   Buckram / Canvas, Buttons

Drafting and stitching tools

c. Measurements:

Full length	=	35"
Chest	=	36"
Waist length	=	16"
Neck	=	15"
Shoulder	=	16"
Sleeve length	=	23"

d. Drafting Procedure:

Front Part

0 - 1	=	full length
0 - 2	=	¼ chest

0 - 3	=	Waist length
2 - 4	=	¼ chest +2"

5 is squared down from 4

0 - 6	=	½ shoulder + ¼ "

7 is squared down from 6

0 - 8	=	1/6 neck + ¼ "
0 - 9	=	0 - 8

Shape front neck 8 - 9

6 - 10	=	1 ½ "

Join shoulder 8 - 10

7 - 11	=	1"

Shape Front armhole (scye) 10 - 11 - 4

5 - 12	=	½ "
1 - 13	=	¼ chest + 4"
13 - 14	=	¾ "

Shape bottom 1 - 14

Shape the side seam 4 - 12 - 14

9 - 15	=	¼ "
15 - 16	=	¼ chest + 1"

Opening at 15 - 16

Back part

8 - 17	=	1/2"

Shape back neck 0 - 17

10 - 18	=	1/2"

Join 17 - 18

11 - 19	=	1/4"

Shape back armhole 18 - 19 - 4

Pocket

Width	=	1/8 chest+ 1 ½ "
Depth	=	width + ½ "

Stand up Collar

0 - 1	=	2"		
0 - 2	=	½ neck + ¾ "		
1 - 3	=	0 - 2		
0 - 4	=	2 - 5	=	½"

Join 4 - 5

2 - 6	=	½ "
3 - 7	=	¾ "

Join 6 - 7

4 - 8	=	1 - 9	=	1/3 of 0 - 2

Shape 6 - 8 - 4 and 7 - 9 - 1

Sleeve

0 - 1	=	Sleeve length + ¾ "
0 - 2	=	¼ chest - ½ "
1 - 3	=	0 - 2
2 - 4	=	1/8 chest - 1/2"
0 - 1	=	1 ½ "

Join 5 - 4

4 - 6	=	2 ½ "

Shape back armhole 0 - 5 - 6 - 4

4 - 7	=	1/12 chest

Shape the front armhole 0 - 7 - 4

1 - 8	=	1/8 chest+2 ½ "

Join4-8

8 - 9   =1 - 10   = 1 ½ "(for hem or inturns)
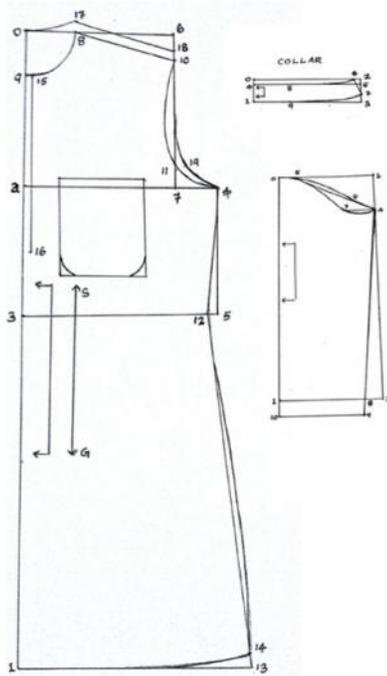
Fig.3.6.7-Kurtha-Draft

e. **Pattern making:**

f. **Layout:**
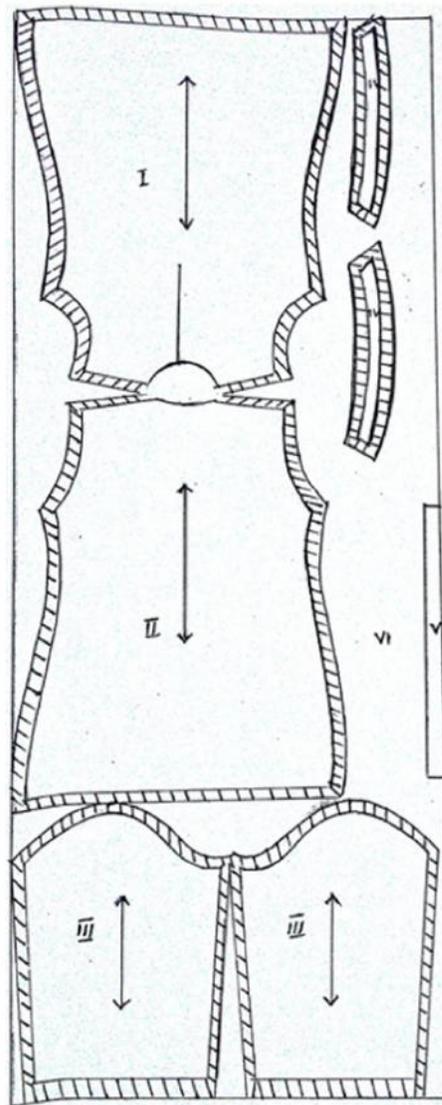
Fig.3.6.8-Kurtha-Layout

g. Estimation of Cloth:

Width of the cloth	=	36" (90 cm)
Amount of cloth required	=	(2 x full length) + seam allowance + sleeve length
	=	(2 x 35) + 4 + 23
	=	97"
	=	2.40 mts

h. Construction Details:

Attach two piece placket.

Join shoulder seam.

Prepare and attach stand up collar.

Attach pocket to the left side of the front bodice.

Join side seam.

Finish the slit.

Attach sleeves.

Finish bottom.

Sleeve

Make notch at centre top

Fold turn at wrist.

Join side seam.

Join the sleeve in such a way that the notch coincides with the line that joins front and back part.

Stitch as set in sleeve.

3.6.5. PRACTICALS

1. Construction of Shirt

   Draft, make paper pattern and construct a Shirt with standard measurements.

2. Construction of Kurtha

   Draft, make paper pattern and construct a Kurtha with standard measurements

3.6.6. ASSESSMENT ACTIVITIES

Assignment   Practical activity

Work diary   Class Test

Portfolio

3.6.7. TE QUESTIONS

1. List the standard measurements for:-Kurtha

2. Using the standard measurements draft a Kurtha.

3. Using the standard measurements draft a Shirt

4. Draw a Layout for a Kurtha

5. Draw a Layout for a Shirt.

Module III - List of practical works

1. Body Measurements

Take body measurements of 5 - 6 classmates & record it. Prepare a chart.

2. Drafting of Basic Bodice- Front and Back.

Draft and prepare paper pattern for front and back basic bodice with standard measurements.

3. Drafting of Basic Skirt - Front and Back.

Draft and prepare paper pattern for front and back basic skirt with standard measurements

4. Drafting of Basic Sleeve.

Draft and prepare paper pattern for basic sleeve with standard measurements

5. Dart Manipulation

Prepare patterns of dart manipulation of differ bodice darts.

6. Drafting Stylelines

Prepare a pattern of princess armhole style line in bodice.

7. Sleeve Variations

Prepare patterns of

> g.   Puff Sleeve - Top gathering
>
> h.   Puff Sleeve - Bottom gathering
>
> i.   Puff Sleeve - Top and bottom gathering
>
> j.   Bell Sleeve
>
> k.   Cape Sleeve
>
> l.   Petal Sleeve

8. Skirt Variations

Prepare patterns of

> d.   A - Line Skirt
>
> e.   Flared Skirt
>
> f.   Circular Skirt

9.   Pattern Alternations

Make alternations in basic patterns for

- h. Large bust
- i. Small Bust
- j. Gaping neckline
- k. Sloping Shoulder
- l. Broad Shoulders
- m. Large Sleeve
- n. Small Sleeve

10. Construction of Pillow Cover

Draft and construct a pillow cover with standard measurements. Decorate it with embroidery / fabric painting.

11. Construction of Apron

Draft and construct an apron with standard measurements. Decorate it with embroidery / fabric painting.

12. Construction of A - Line Dress

Draft, make paper pattern and construct an A-Line dress for a girl child with standard measurements.

13. Construction of Salwar

Draft, make paper pattern and construct a Salwar for a lady with standard measurements.

14. Construction of Kameez

Draft, make paper pattern and construct a kameeez for a lady with standard measurements.

15. Construction of Shirt

Draft, make paper pattern and construct a Shirt for an adult man with standard measurements.

16. Construction of Kurtha

Draft, make paper pattern and construct a Kurtha for an adult man with standard measurements

MODULE - IV
Fashion Designing & Boutique Management

OVER VIEW

Fashion designing is a combination of perception of one's ideas, giving it a form, designing it in a suitable colour and illustrating it in an appealing way. To excel in fashion and apparel designing, a sound knowledge regarding the basics of elements of design and how to use it according to the principles is also essential. This imparts completeness to a design. Dresses designed with variety, uniqueness and beauty are very popular with the consumers. Though fashion trends keep changing every day, the basic elements remain the same forever.

Module 4 has been designed to include all relevant chapters to attain a thorough knowledge regarding Fashion and Apparel designing. The last chapter of this module deals with fashion merchandising and boutique management which will help the learner to know about the marketing sector of the fashion industry. After completing this module, the learner would be able to create a portfolio on their own.

UNIT - 4.1
ELEMENTS OF DESIGN

4.1.1. INTRODUCTION

The word 'design' has several meanings such as purpose, plan, scheme, selection, arrangement and organization. It describes the entire design procedure. Both design and designing are important in the field of fashion as well as art. Design is a part of our daily life. It is found in nature as well as in man-made environment. Shapes, forms, lines, light, colours and textures all combine to become a unified whole which is commonly called a "Design". The knowledge of elements of design is very important because they are the main components with which artist/designers work, to create a basic design / apparel.

4.1.2. LEARNING OUTCOMES

The learner;

- Defines the term design.
- Identifies the types of design
- Compares different types of design.
- Compares the different types of lines and their character.
- Chooses suitable lines in designing garments or textiles.
- Compares different types of shapes
- Chooses suitable shapes for garment designing
- Compares different types of forms
- Explains the properties of colour.
- Defines the term texture.
- Compares visual and tactile texture.
- Explains different methods to create texture effects.
- Creates different textures in designing
- Explains the effect of natural and artificial light in garments.

4.1.3. DESIGN

Design is an orderly arrangement of elements like lines, shape, form, texture etc. in an aesthetic manner. Design can be described as a plan or a skilful way of doing a sketch or drawing which is visualized and then represented for the construction of an object.

4.1.4. TYPES OF DESIGN

Designs can be broadly classified into two types:

4.1.4.1. Structural Design

Structural designs are made by joining together lines, forms, etc together. It is a simple design, which is suitable to the purpose for which the article is made. It is the overall design of a garment. In apparel structural design is more important because it is the fundamental component of design. The requirements of a good structural design are:

i.   The design must be functional in sense. It should be suitable for the purpose for which it is made.

ii.   The design must have correct proportions.

iii. It must be simple.

iv.   It must be suited to the material of which it is made.
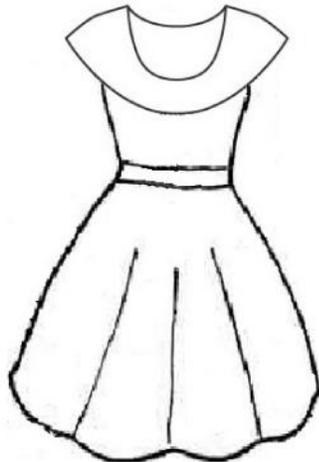
Fig. 4.1.1 - Structural Design   **Fig. 4.1.2 - Decorative Design**
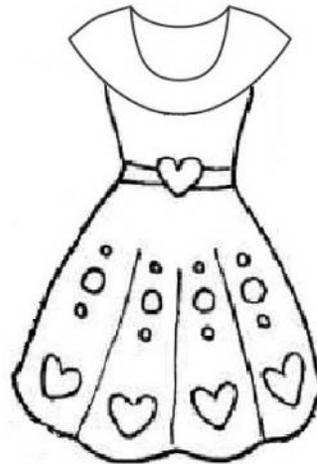
4.1.4.2. Decorative Design

A decorative design is an additional enrichment on a structural design. A decorative design consists of any lines, colours, or materials that have been applied to a structural design for the purpose of adding a richer quality to it. In garments decoration can be created through various types of prints, braids, embroidery, buttons etc. The decorative design should fulfil several requirements:-

i.   The decoration should be used in moderation and should be placed in structural points, to strengthen the shape of the object.

ii.   The decoration should be suitable for the purpose for which the object is made.

iii.   There should be enough background space to give an effect of simplicity and dignity to the design.

Another classification of designs are as follows:-

4.1.4.3. Naturalistic design

It imitates or copies the nature in a photographic manner. I include pictures/designs/ photographs of flowers, fruits, animals.

4.1.4.4. Stylized design

These are simple designs which have its original structure from natural design. These are modified natural designs.
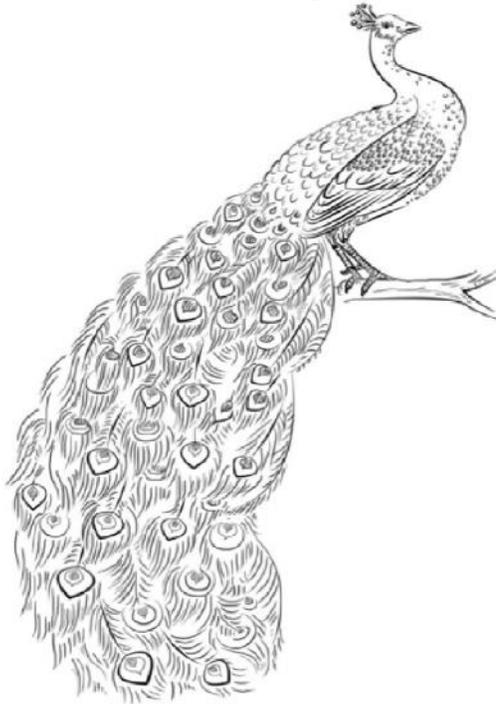
Fig.4.1.3 - Naturalistic Design   **Fig.4.1.4 - Stylized Design**

4.1.4.5. Geometric design

Combination of geometric forms like line, circle, square etc

4.1.4.6. Historic design

These are designs which indicate our glorious past or stories of history.
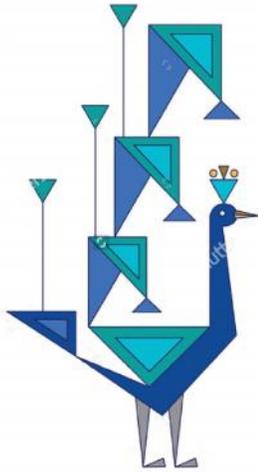
Fig.4.1.5 - Geometric Design   Fig.4.1.6 - Historic Design   Fig.4.1.7 - Abstract Design

4.1.4.7. Abstract design

These designs are formed by the indistinct fusion of lines, colours, form texture etc. These are entirely dependent on the skill of the designer. They may not resemble real objects.

4.1.5. ELEMENTS OF DESIGN

Any design is made by some factors such as lines, colour, texture etc. These raw materials or ingredients, of which designs are made, are called elements of design. These elements are the basic units of a visual image. The basic elements of design are lines, shape, form, colour, texture and light.

4.1.6. LINES

A line is a series of connected points. It is the simplest of the design elements. All lines have direction, width and length. Lines within a garment are created by darts, seams, and decorative items or details. Each kind of lines produces its own special effect. Lines are the greatest device of fashion designers. Since line creates illusion of height, and width, they can be used to one's requirement to tone down or exaggerate a particular figure type. In order to use line correctly, it is important to understand the functional and emotional significance of lines. There are two types of lines-straight lines and curved lines.

Types of Lines

There are two types of lines - Straight lines & Curved lines

4.1.6.1. Straight Lines -

Vertical, Horizontal, Diagonal, Zigzag

Straight lines are opposite to curved lines as they are rigid and crisp. They are bold and suggest dignity, power and formality. Straight lines as create an optical illusion. Straight line and shape denote force and strength and have masculine quality,

a.   Vertical lines

- They generally add height or length to the body.
- Gives the impression of being taller/thinner.
- Gives a feeling of dignity, strength, poise and sophistication.
- Vertical lines carry the eye upward and downward direction which will give the illusion of tallness.
- Vertical lines can also be achieved by a row of knife pleats or pin tucks or by piping inserted in a vertical seam, so as to emphasis the line.
- Vertical lines are also associated with formal wear.

b.   Horizontal lines

- They make the eye travel from side to side and so give the effect of width and shorten the body.
- Can attract attention towards one part of the body.
- They carry the eye across the body.
- Horizontal lines by spacing can produce the illusion of length.
- Gives the impression of being shorter and heavier.
- Gives a relaxed and calm feeling, suggests rest and gentleness.
- These lines are not flexible and informal and a horizontal effect can also be achieved by rows of tucks or lace.

c.   Diagonal lines

- Diagonal lines satisfy combination of both.
- They always show a movement or motion.

- They are slimming because they direct the eye over body curves at an angle.

d. Zigzag lines

- It is a series of connecting diagonal lines.

- It forces the eye to shift abruptly and repeatedly.

- They tend to increase the size of the area covered by them.
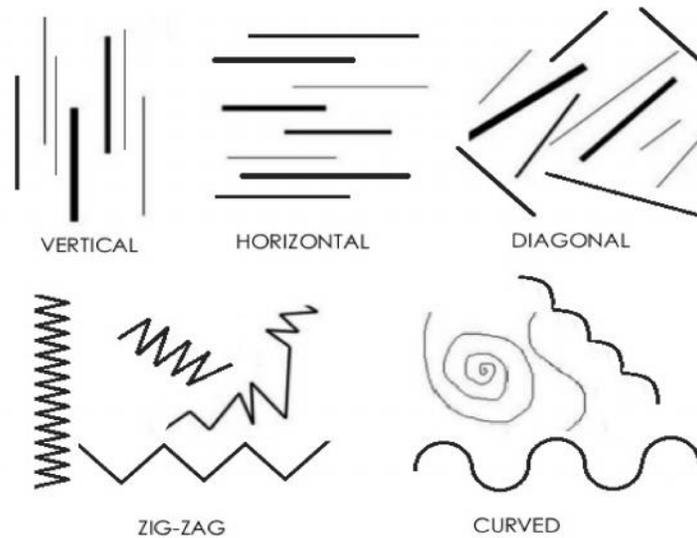
Fig.4.1.8 - Types of Lines

4.1.6.2. Curved Lines

Curved lines creates an entirely different mood and it considered to be more graceful than a straight line. It can even add weight to a thin person. Curved lines are graceful and gives a feminine effect.
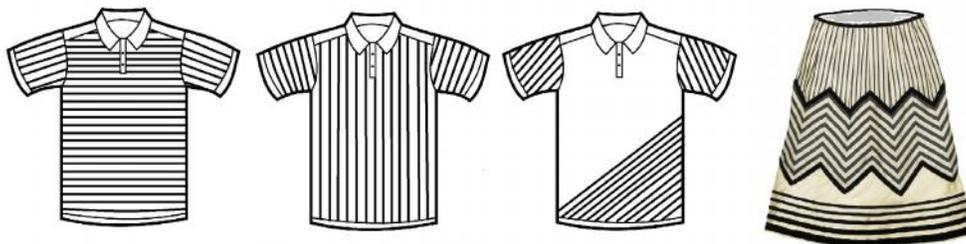
Fig.4.1.9 - Types of Lines in Garments

4.1.7. SHAPE

A shape is defined as a two dimensional area that stands out from the space. All objects are composed of shapes. Basic shapes are:

    a. Geometric shape

    b. Organic shape

    c. Inorganic shape

The overall shape of a garment is its shape or silhouette. Wide, full shapes in clothing make the wearer to look larger. Trim, compact silhouettes shapes in clothing make the wearer to look smaller. Straight tubular shapes in clothing make the wearer look taller. Silhouettes in fashion change over time. Learning to recognize fashion silhouettes can make it easier to date fashions, as well as help to understand which silhouettes work best for a body type. There are mainly four types of silhouette or the outline of the garment:

A-line   Ball gown   Empire   Sheath   Mermaid   Asymmetrical

Fig.4.1.10 - Shapes of Gown

a. **A-line** - An A-line dress will flair out from waist and will have a silhouette like the letter "A" as it falls to the ground. It is softly shaped at the waist. It gracefully hugs the natural curves of the upper body and then it flares out into the "A" shape as it falls. This silhouette is flattering to most body types, but it does emphasize the waist.

b. **Ball gown** - Fitted bodice and waist with a skirt that flares for the maximum at the hemline looks. This gives fantastic look for taller brides.

c. **Empire** - The empire-style gown has a high waistline under the bust and flares out the skirt. This silhouette involves a line below the bust that creates two panels dividing the garment. It elongates the body, giving an appearance of being taller.

d. **Sheath** - The sheath silhouette is a straight cylindrical shape to a garment achieved by giving the same measurements to the chest, waist and hem.

e. **Mermaid**- This silhouette is used to refer dresses that are firm-fitting from the bust through the length of the knee and then flares out. This is generally recommended for thin women who have gentle to no curves.

f. **Asymmetrica**l - This garment style does not have a symmetrical form. This can be achieved by varying the panels, fabric used for hemline.

4.1.8.   FORM

It is a three dimensional object. It can be measured by its height, width, and depth. Form and line are closely related. Basic forms are the sphere, the cone, the cube, ovals, cylinders and rectangles.

Fig.4.1.11 - Form

4.1.9.COLOUR

Colour plays a large role in the designing of garments. Used in a planned, controlled arrangement; colours can produce many moods; can reduce tensions or increase tensions etc. Colours are often described in three particular terms - hue, value and intensity. These are the qualities of colour or dimensions of colour.

a. **Hue** : Hue refers to the name of the colour itself such as 'red' or 'blue' etc. There are six basic hues red, yellow, blue, green, orange and violet.
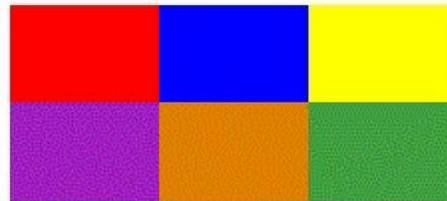
Fig.4.1.12 - Basic Hues

b. **Value** : Value of a colour means the lightness and darkness of a hue. The lightest or highest value is white and the darkest or the lowest value is black.

Fig.4.1.13 - Values of Green Hue

c.   **Intensity / Chroma** : The intensity of a colour refers to the brightness or dullness of the colour.

Fig.4.1.14 - Intensity Scale of Blue and Red

4.1.10. TEXTURE

Texture refers to surface characteristic and appearance of an object. Texture is one element which can be seen and felt. It may be explained as a material feels when the fingertips are run lightly along its surface. Texture is created in fabric by the fiber type, weaving or knitting process, or by the fabric finishes. Loopy, fuzzy, furry, soft, shiny, dull, bulky, rough, crisp, smooth, sheer are some of the textures. A thin organza is not appropriate for a coat nor is a thick wool fabric appropriate for a clinging evening gown. The professional designers must consider the difference between fabrics and then style them accordingly.

Each of the elements of texture will have an influence on the total appearance of the garment and the figure wearing it. Shiny and glossy texture reflects light and thus increases the apparent size of the wearer. They also reveal the true shape of the person. Slender well proportionate persons can wear satins and other shiny surfaced fabrics. Dull fabrics absorb light and thus tend to decrease the apparent size of the wearer and to conceal the true silhouette. Stiff or crisp fabrics increase the size but conceal the true figure, as they hang away from the natural contour of the body. Heavy fabrics also increase the size of the wearer.

Fig.4.1.15 - Texture in Garments

4.1.10.1. Types of Texture

There are two types of texture:

ii.   **Tactile Texture**:- Texture that can be felt by touch. (rough, pricky). The actual texture needs to either be felt, or seen with light raking across its surface to make the texture visible

iii. **Visual Texture**:- Visual texture refers to the illusion of the surface's texture. Texture that can be seen. (Shiny, dull, matte)

4.1.10.2. Illusions created by Textures in Clothing

-   Smooth, flat textures make people look smaller.

-   Shiny Textures make the body look larger because they reflect light. They make fabric colours look lighter and brighter, thus making the body look larger.

-   Rough textures tend to subdue the colours of fabrics.

-   Sheer fabrics reveal the true body shape. It tends to soften the figure when used over a soft lining.

-   Dull textures make a person appear smaller because they absorb light.

-   Clinging, soft textures reveal the body's true silhouette.

-   Stiff crisp textures make the total shape appear bigger because they stand away from the body.

-   A small, overall print tends to make the wearer look smaller.

-   Large, bold patterns increase the apparent size of the wearer.

4.1.11. LIGHT

Light is another element of design which creates many dramatic effects in the appearance of design. Artificial lights tend to change the colour and appearance of clothes. Hence the dress to be worn under daylight should be selected in natural light. Evening party wears and night wear dresses should preferably be selected under artificial light to look attractive.

Physical Effects of Light

The quality of light is determined by the source. Light can accent, distort, subordinate, minimize, and rearrange contours of shape.

1.   Small sharp source will create

   a.   Bright highlights,

b. Sharp edges of the beam of light and the objects illuminated,

c. Darker shadows with defined edges,

d. Accents differences,

2. Broad diffused source will

a. Soften shadows and highlights,

b. Flatten shapes,

c. Smoothens textures

3. The angle of incidence of light is equal to the angle of reflection

a. Sharp focus/low angle on shiny fabric creates more bounce toward audience/viewer, flattens objects and causes objects to appear bright.

b. Sharp focus/high angle on shiny fabric will reflect more light reflected back to viewer causing colours to appears brighter.

c. Sharp focus/high angle on dull fabric will be absorbed causing colours to appear duller.

4. The intensity of the light source changes the perception of density

a. A dim source will cause all surfaces to appear more opaque than they are.

b. A bright source will cause transparent or semi-transparent surfaces to appear nonexistent or more transparent than they are

5. Temperature is both a physical and psychological attribute of light

a. Shiny surfaces are cool to the touch and reflect light making the viewer feel cold.

b. Dull surfaces are warm to the touch and absorb light making the viewer feel warm.

Psychological Effects of Light

Our moods and sense of well-being are affected by the qualities of light. Lightness is associated with openness, clarity, awareness, alertness, and knowldge. Expressions of lightness include "Seeing the light", "The age of enlightenment" or " have a bright idea"

- Too much light is tiring.

- Too bright/high intensity. Illuminates too large of a surface.

- Illuminates too evenly, causes objects to look flat or 2D.

Darkness is associated with gloom, mystery, quietness, seriousness, depression, threat, fear of the unknown, ignorance, age, sophistication, and experience.

Not enough light is tiring and make the viewer work too hard to see. The older the viewer the more light is required to see as the eyes age. Hearing clearly can also be affected by the ability to see what is making the noise or who is talking.

4.1.12. PRACTICALS

1. Illustration of Types of Design

Make a portfolio illustrating application of the following types of designs in garments.

    a. Structural Design

    b. Decorative Design

    c. Natural design

    d. Geometric Design

    e. Stylized Design

    f. Historic Design

    g. Abstract Design

2. Illustration of Elements of Design - **Line**

Make a portfolio illustrating application of the following types of lines in garments.

    a. Vertical Lines

    b. Horizontal Lines

    c. Diagonal Lines

    d. Zig - zag Lines

    e. Curved Lines

3. Illustration of Elements of Design - **Shape**

Make a portfolio illustrating different shape (silhouette) of any garment (Gown/Frock/ Skirt/Shirt/Trousers). (2 - 4 illustrations)

4.   Illustration of Elements of Design - **Form**

Make a portfolio illustrating different forms in garments. (2 - 4 illustrations).

5.   Illustration of Elements of Design - **Colour**

Make a portfolio illustrating application of colours in garments. (2 - 4 illustrations)

6.   Illustration of Elements of Design - **Texture**

Make a portfolio illustrating different textures using the following methods of creating textured effects. (5 - 10 illustrations)

a.   Thread Rolling: Take thick thread and ramp it roundly on any circular object like pencil. Apply colour on the thread. Now roll the pencil with the coloured thread on a piece of paper. This gives the thread rolling texture. The number of colours has no restriction.

b.   Thread Pulling: Take a normal thread, probably white in colour. Hold two ends of the thread randomly on a paper holding one end. Cover it with another paper Hold the paper tightly and pull the thread. This is the thread pulling texture.

c.   Thread dabbing: Take a piece of thread, crush and hold it in hand. Apply the colour to the thread, while holding. Remove the extra colour and then dab it to attain the texture.

d.   Paper fold texture: Take a piece of paper and fold it at the centre, and then so open the paper and sprinkle few drops of poster colour at the centre fold line. Now, fold the paper and rub it hard to spread the colour. Open the fold, you get beautiful textures. This paper fold texture also known as "Butterfly texture".

e.   Paper dabbing: Take a piece of paper and crush it. Apply poster colour to the crushed paper and dab it on another piece of paper to on get the required texture. Before dabbing, remove the extra colour by pressing it against some extra paper.

f.   Wax drop texture: For this type of texture, make any design on a piece of paper with a pencil. Light a candle and drop the wax drop by drop on the design. Once this is done, by using any colour, paint the entire paper. After sometime, remove the dried wax drops with the help of some sharp object, without tearing the paper. This would leave the design in white and the remaining part in colour.

g. Blow Texture: Take a piece of paper and sprinkle a few drops of water proof ink or oil paint, blow hard. When you blow, the ink would flow. This forming blow texturing and the number of colours have no restriction.

h. Water drop texture: Take a piece of paper and apply a layer of water on paper using brush and then sprinkle water proof ink or oil paint on it. Because of the wet paper, the colour would spread.

i. Gum drop Texture: Apply a layer of gum with brush on a piece of paper and immediately sprinkle poster colour over it. The colour spread because of the gum base. This gives the required texture.

j. Marble Texture: Take water in a container in which the texture has to be done, can dip easily. Mix -2-3 drops of white poster colour in the water. Let the water stand still. Then sprinkle few drops of water proof ink or oil paint to the container and dip the paper on it and shake. When the paper is taken up, it will have the waves of different colours and this is the required texture.

k. Jute Texture (With dry medium): Take a piece of jute and place a piece of paper over it and rub. Use only dry colour such as pencil colour or wax or crayons to rub on the paper. This would give the texture of the jute on the paper.

l. Jute Texture (With wet medium): Take a piece of Jute and apply poster colour thickly, do not add water. Place this jute on the paper piece and rub, So that, the colour from the jute comes on the paper. This would give the required texture.

m. Thumb Texture: In this, take a piece of paper and apply colour on the thumb and then dab it on the paper piece, the texture is said to be correct, when the finger prints are most prominent.

n. Vegetable Texture (Potato Texture): Cut the potato in two pieces. Then carve out the design on it and colour it with any Fabric paint. Apply colour to the carved surface and then dab it on the paper to achieve the texture. This is another type of block printing method.

o. Vegetable Texture (Onion Texture): Cut onion horizontally in to two pieces and wipe off to remove extra water: now apply fabric colour and dab it on the paper to get the texture.

p. Match stick texture: Take a piece of card board and stick the match stick on the board, forming any design. Remove the black portion of the stick before using. After that, apply colour on the match stick, and dab it on the paper. This give the match stick texture and is a type of block print.

q. Blade Texture: Take any thick paint on the corner of the blade and scrub it on a piece of paper. This would give the blade texture.

r. Batik Texture: Make any design on a piece of paper and colour it with water proof ink or oil paint. Once this ink or paint dries, apply white poster colour to the sheet and immediately put the paper under the running tap. This would result in the removal of black colour from some place and would appear in some places. On the design, giving it a crated effect. This is batik texture.

s. Rubber Solution: Draw any design on a piece of paper and apply thick layer of rubber solution on it. Let it dry. Next, paint the entire sheet with any coloured water proof ink or oil paint. Let the ink or paint dry. Then remove the rubber solution with the circular portion of the finger.

4.1.13. ASSESSMENT ACTIVITIES

1. Assignment
2. Class Test
3. Puzzles
4. Seminar
5. Practical Activity

TE QUESTIONS

1. Differentiate Structural and decorative design.
2. Explain the properties of different types of lines.
3. Illustrate different types of shapes in a garment.
4. Create a garment design with a soft texture.
5. Suggest a garment shape for a shot and stout girl.

UNIT - 4.2

PRINCIPLES OF DESIGN

4.2.1. INTRODUCTION

Designing is not an end in itself but a means of accomplishment. It is a tool for change towards meaningful objectives. Through thoughtful balancing moving, repeating, emphasizing and contrasting the design elements, a thoroughly satisfying and unified art form can be achieved. These principles of design are also used in fashion designing and so this chapter is designed in such a way to impart relevant information.

4.2.2. LEARNING OUTCOMES

The learner:

- Defines the principles of design.
- Compares types of balance.
- Applies the principle of balance in fashion designing.
- Explains the principle of proportion.
- Applies the principle of proportion in fashion designing.
- Compares the different ways of producing rhythm.
- Applies the principle rhythm in fashion designing.
- Explains the principle emphasis.
- Applies the principle emphasis in fashion designing.
- Explains the principle harmony.
- Uses the principle harmony in designing.

4.2.3. DESIGN PRINCIPLES

Design principles should be regarded as guides rather than rigid rules. These principles are not actually formulae for creating beauty, but they help one to judge the clothing selected is artistically good or bad. One can acquire this taste by experience and by becoming sensitive to beauty. The major principles of design are:

1. Balance
2. Proportion
3. Rhythm

4. Emphasis

5. Harmony

4.2.4. BALANCE

Balance is the principle of design that produces a feeling of rest and equilibrium. It is the concept of visual equilibrium, and relates to our physical sense of balance. It is attained by grouping lines, shapes or colours around a central point in such a way that the general effect has sense of equilibrium. Balance is of two types - Formal & Informal.

4.2.4.1. Formal balance (Symmetrical balance):

It is also known as symmetrical balance. Here objects of equal interests and weight or identical objects are placed on either side of the imaginary centre. Most dresses and suits have formally balanced designs. In formal balance upper and lower portions of a design are arranged in such a way that equal weight is given to both parts. Too much weight at the bottom gives an heavy appearance. For example a dark blouse and light skirt would make a short person shorter.

4.2.4.2. Informal balance (Asymmetrical balance):

Here objects are placed not in equal distance, but placed such that they appear to be in equilibrium. Lighter or smaller objects are placed closer to the central point, while heavier and bigger objects are placed farther away. Dissimilar designs are used in informal balance.
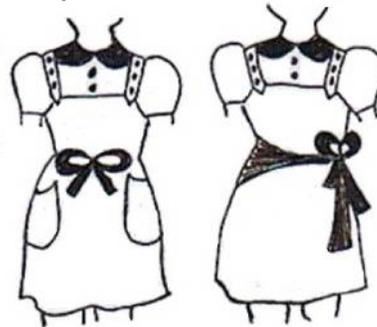
Fig. 4.2.1 - Balance in Dress

4.2.5. PROPORTION

The principle of proportion, is also known as the 'law of relationships'. It refers to how an object, idea or colour is related to other with regard to size, numbers, quantity etc. Proportion is considered as a scale or ratio of the different parts of a design. Every time two or more things are put together, good or bad proportion are established.

Articles of apparel worn together should not show too great a difference
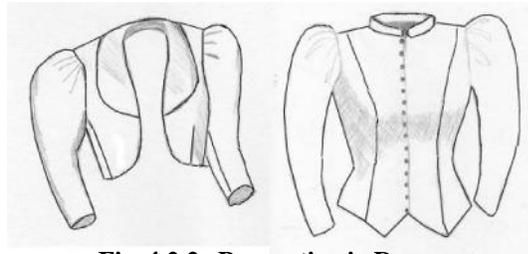
Fig. 4.2.2 - Proportion in Dress

in size relationship to wearer. The articles should not differ too greatly in size from each other. The individual sections of the garment such as sleeves, pockets, collars, motifs or surface patterns must all be related to the size of the wearer and to one another.

'The Greek Oblong' is considered as most appropriate ratio of space divisions and it is also called as "the Golden Oblong". It is recognized standard for space relationship. This oblong always uses the ratio of 2 : 3 or 3 : 5 in case of flat surfaces, and 5 : 7 : 11 in the case of solids.

4.2.6. RHYTHM

Rhythm as an art principle is defined as easy, connected path along which the eye follows a regular arrangement of motifs. This creates interests and reduces monotony. Rhythm can be achieved in the following ways. It allows the eye to glide smoothly from the centre of interest to other parts of design by means of rhythmic movement through related lines, shapes or colours. This orderly movement may be obtained by following means:

4.2.6.1. Rhythm by Repetition:

Rhythm is produced when a line, shape or colour is repeated at regular intervals. A common example for rhythm in dress is a series of buttons placed along the front opening of dress.

4.2.6.2. Rhythm by Gradation:-

It refers to gradual changes in colours, shapes or sizes. Gradation means a sequence or regular progression of objects in a series. In dress it can be produced by the use of tucks, ruffles of varying width etc. Gradation of colour is very forcible and effective in garments.

4.2.6.3. Rhythm by Radiation:

In this type, the eye movement is from the central part of the design to outer portions.

Repitition   Gradatation   Radiation
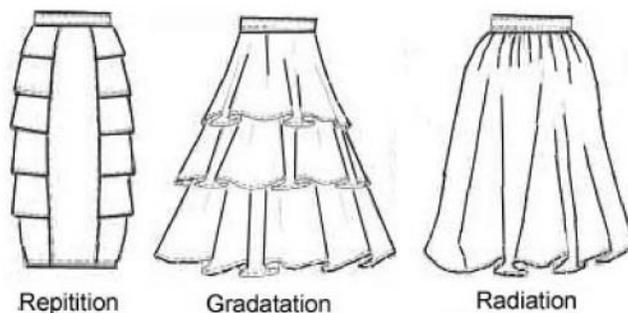
Fig. 4.2.3 - Rhythm in Dress

4.2.7. EMPHASIS

Emphasis, a center of interest, draws attention to their local point of a garment. A center of interest should be related to the total structure of the garment. This means a dominating object, dominating colour or dominating idea in a design. Emphasis means having a particular point of interest with every other detail subordinate to it. A centre of interest is created by arranging different elements of design in a special way. The emphasis can be created through,

a. use of special lines,

b. use of different shapes in a design,

c. leaving sufficient background space around the object,

d. use of contrasting colours,

e. grouping of objects,

f. use of decorations in a design,

g. Use of lights and shades.

Fig. 4.2.4 - Emphasis in Dress

4.2.8. HARMONY

To be in harmony means to be in agreement and to be pleasant. It produces an impression of unity in design through the selection and arrangement of different elements of design. Harmony is the fundamental requirement in any piece of design. There are six aspects of harmony: -

a. Harmony in lines,

b. Harmony in shapes,

c. Harmony in size,

d. Harmony in texture,

e. Harmony in colour and

f. Harmony of ideas.
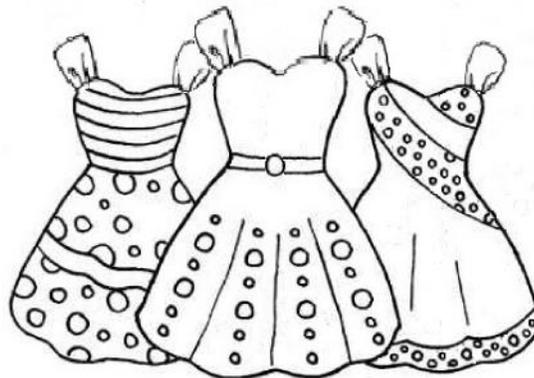
Fig. 4.2.3 - Harmony in Dress

4.2.9. PRACTICAL

1. Illustration of the Design Principle - Formal Balance

   Make a portfolio illustrating application of the design principle Balance - Formal Balance in garments.

2. Illustration of the Design Principle - Informal Balance

   Make a portfolio illustrating application of the design principle Balance - Informal Balance in garments.

3. Illustration of the Design Principle - Proportion

   Make a portfolio illustrating application of the design principle Proportion in garments.

4. Illustration of the Design Principle - Rhythm through Repetition

   Make a portfolio illustrating application of the design principle Rhythm through Repetition in garments.

5. Illustration of the Design Principle - Rhythm through Gradation

   Make a portfolio illustrating application of the design principle Rhythm through Gradation in garments.

6. Illustration of the Design Principle - Rhythm through Radiation

   Make a portfolio illustrating application of the design principle Rhythm through Radiation in garments.

7. Illustration of the Design Principle - Emphasis

   Make a portfolio illustrating application of the design principle Emphasis in garments.

8. Illustration of the Design Principle - Harmony

   Make a portfolio illustrating application of the design principle Harmony in garments.

4.2.10. ASSESSMENT ACTIVITIES

1. Assignment   2. Class Test   3. Puzzles
4. Seminar   5. Practical Activity

TE QUESTIONS

1. List the principles of design and its relevance in fashion designing.
2. Compare between Formal balance and informal balance.
3. Define the Law of Relationship giving suitable examples.
4. Illustrate the methods by which rhythm can be obtained in garments.
5. Define emphasis and list the ways through which emphasis can be created.
6. Discuss the principle of harmony and list major aspects of the same.

UNIT - 4.3
COLOUR

4.3.1.　INTRODUCTION

Colour plays an important role in any design. Colour is the first attraction in a garment. Used in a planned, controlled arrangement, colours can produce many moods and can reduce tensions or increase tensions. The colour of an object depends on the light falling on it and also the pigments used in its making. There are two colour systems used by designers and various colour schemes that aid in creating a good garment design. This chapter deals with different colours, their classification, properties, and different schemes. It also gives an idea of how well to use colour in designing. Colour is the most exciting design element as it is the first thing noticed in a garment and attracts the consumers.

4.3.2.　LEARNING OUTCOMES

The learner:

- Explains the dimensions of colours.
- Differentiates the primary, secondary and intermediate colours.
- Makes colours through mixing of various colours in different proportions.
- Chooses the appropriate colours for a design.
- Differentiates the colour schemes.
- Applies different colour schemes in designing of garments.
- Chooses most pleasing colour schemes for garments.
- Explains the concept of colour rendering
- Creates designs using rendering of colours.

4.3.3.　DIMENSIONS OF COLOUR

Colours are often described in three particular terms - hue, value and intensity. These are called as the qualities of colour or dimensions of colour.

4.3.3.1. Hue :

Hue refers to the name of the colour itself such as 'red' or 'blue' etc. There are six basic hues-red, yellow, blue, green, orange and violet
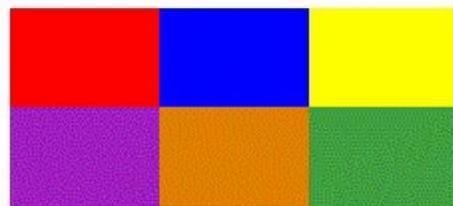
Fig.4.3.1 - Hue

4.3.3.2. Value

Value of a colour means the lightness and darkness of a hue. The lightest or highest value is white and the darkest or the lowest value is black. Lightest values of a colour are also called 'tints'. By adding white to the colour one obtains 'tints' which are lighter than the normal value. 'Shades' are darker than the normal value. By adding black to the normal colour one gets 'shades'

Fig.4.3.2 - Value Scale of Blue

which are below the normal value. Value scale is a graded scale of tints and shades, ranging from white at the top to black at the bottom.

4.3.3.3. Intensity / Chroma :

The intensity of a colour refers to the brightness or dullness of the colour. The effects of intense colours may be reduced by adding grey to them. Adding gray or mixing the complementary colour to normal hues results in dull colours. A dull colour is unsaturated or low in intensity. A color without any brightness is achromatic (black, white and gray).
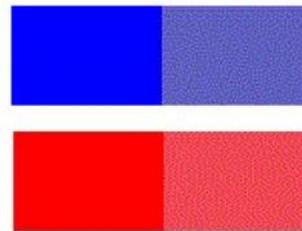
Fig.4.3.3 - Intensity

4.3.4. PRANG COLOUR SYSTEM

There are several theories regarding colours in pigment. One of the simplest is the prang colour system. This explains the primary, secondary and intermediate colours of pigments.

4.3.4.1. Primary Colours

Red, yellow and blue are the primary colours available in pigments. They cannot be obtained by the combination of other colours and all other colours are obtained by the combination of these primary colours in different proportion.
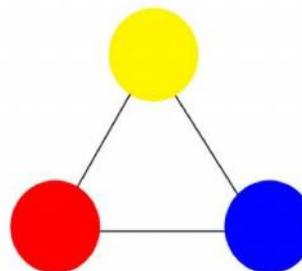
Fig.4.3.4 - Primary Colours

4.3.4.2. Secondary Colours

When two primary colours are mixed in equal proportion a secondary colour is obtained.
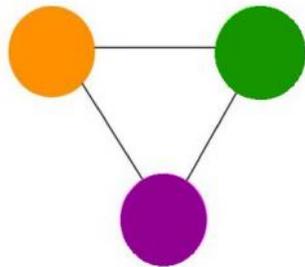
Yellow	+	Blue	=	Green
Blue	+	Red	=	Violet
Red	+	Yellow	=	Orange

Fig.4.3.5 - Secondary Colours

4.3.4.3. Intermediate colours

If a primary colour is combined with an adjacent secondary colour the resultant colour is called intermediate colour.

Yellow + Green	=	Yellow	- Green
Green + Blue	=	Blue	- Green
Blue + Violet	=	Blue	- Violet
Violet + Red	=	Red	- Violet
Red + Orange	=	Red	- Orange
Orange + Yellow	=	Yellow	- Orange
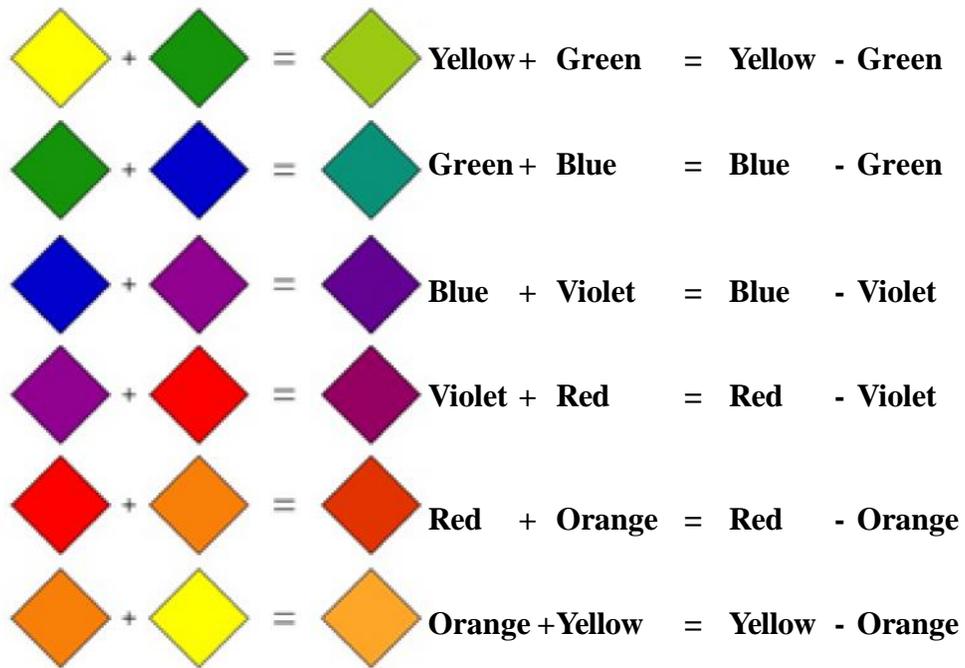
Fig.4.3.6- Intermediate Colours

4.3.4.4. Neutral Colours

The Black, White and Grey are neutral colours. They are used in backgrounds.
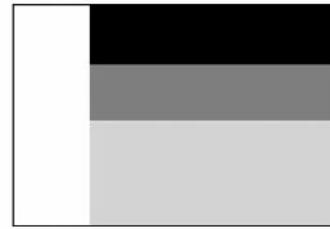
Fig.4.3.7 - Neutral Colours

4.3.4.5. Prang Colour Wheel
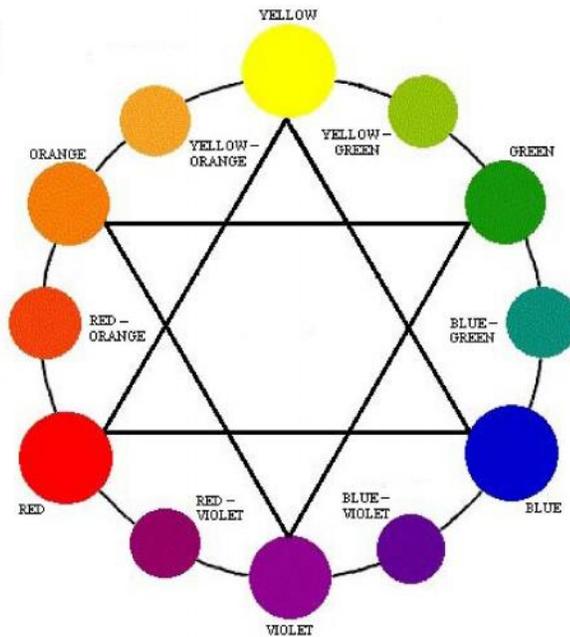
Fig.4.3.8- Prang Colour Wheel

Prang Colour Wheel gives a clear demonstration of the primary, secondary and intermediate colours. The colour combinations in designing is made with the help of prang colour chart. (The outer circle of the prang colour wheel is given below. The actual wheel contains inner circles of tertiary and quaternary colours.)

4.3.4.6. Warm and Cool Colours:

The colour wheel can be divided into warm and cool sides. The colours on the red side of the wheel are said to be warm because they are associated with warm phenomena. Warm colours are red, orange, and yellow. They appear to be hot like the sun, or like fire. Orange is the warmest colour. Warm colours give a feeling of gaiety, activity, and cheerfulness and lively mood. Warm colours appear to advance, or to come toward the observer. They make the body look larger.

Cool hues make them seem reduced in size and far off. The green side implies cool phenomena. Cool colours are green, blue, and violet. They remind us of water or the sky. Blue is the coolest colour. Cool colours give a feeling of quietness and

restfulness. They suggest a subdued mood. If overdone, they can be depressing. Cool colours appear to recede, or to back away from the observer. They make the body look smaller. Designers often use cool colours for garments in large sizes. So those people look smaller. While warm colours are cheerful, cool colours are calm and restful.
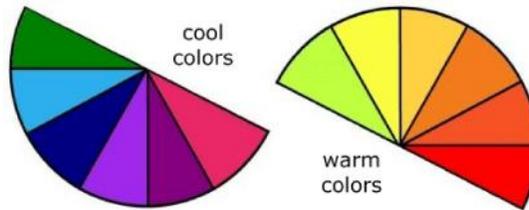
Fig.4.3.9- Warm and Cool Colours

4.3.5. COLOUR SCHEMES

Colour schemes or colour harmonies mean the different combinations of colours in a design in a pleasing way. Colour schemes which are produced through the aid of a prang colour wheel are of three types:

    i.   Related Colour Schemes

    ii.   Contrasting Colour Schemes

    iii. Achromatic Colour Schemes

4.3.5.1. Related Colour Schemes:

They are produced by combining colours that lie near to each other on the prang colour wheel. Monochromatic Colour Scheme and Analogous Colour Scheme are related colour schemes.

a.   **Monochromatic Colour Scheme :** It is a one colour scheme ('mono' means 'one' and 'chrome' means 'colour'). It consists of combining different values or intensities of the same hue.

    E.g.:- Green, Light green and Dark green
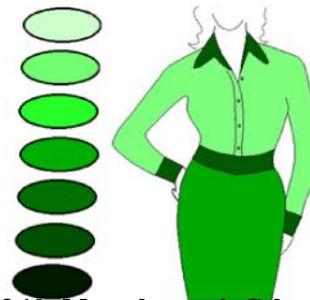
Fig.4.3.10 - Monochromatic Colour Scheme

b.   **Analogous Colour Scheme :** An analogous colour scheme or adjacent colour scheme is a combination of two or three neighbouring colours on the colour wheel. A combination of colours within one - quarter of the Prang Colour Wheel, which include only one primary colour, one secondary colour and one intermediate colour, is more pleasing.
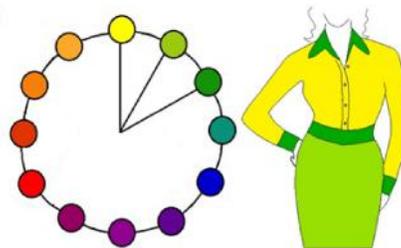
Fig.4.3.11 - Analogous Colour Scheme

E.g.:- Yellow, Yellow-Green and Green is more pleasing than Yellow-Green, Green and Blue-green.

4.3.5.2. Contrasting Colour Schemes:

These are produced by combining colours that are far apart on the colour wheel. There are four types of contrasting colour schemes.

a.   **Direct Complementary Colour Scheme**: Complementary colours are those which lie direct opposite to each other on the colour wheel. There are six such pairs,

   i.   Yellow & Violet

   ii.   Yellow - Green & Red - Violet

   iii.   Green & Red

   iv.   Blue - Green & Red - Orange

   v.   Blue & Orange

   vi.   Blue - Violet & Yellow - Orange
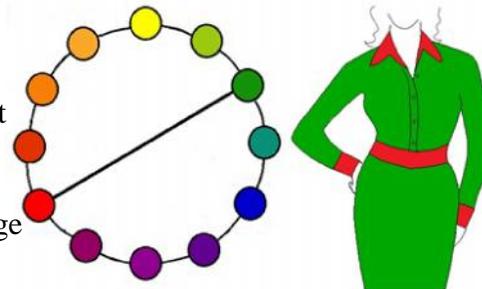
Fig.4.3.12 - Direct Complementary Colour Scheme

b.   **Split Complementary Colour Scheme:** is obtained by using any one colour and the two colours that lie on either side of its complementary colour.

   E.g.:- Yellow, Blue-Violet & Red-Violet
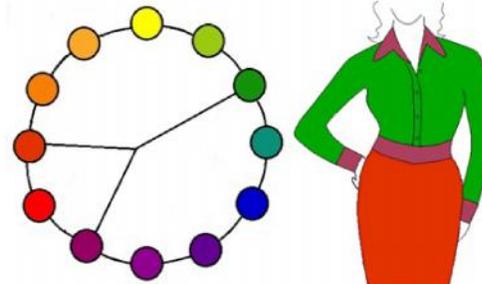
Fig.4.3.13 - Split Complementary Colour Scheme

c.   **Double Complementary Colour Scheme:** It is obtained by combining two adjacent colours and their complementary colours.

   E.g.:- Yellow, Yellow - Green, Violet & Red - Violet
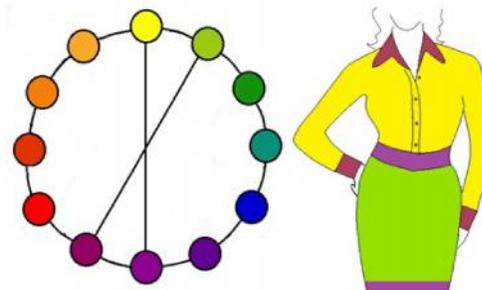
Fig.4.3.14 - Double Complementary Colour Scheme

d.   **Triad Colour Scheme:** is one which combines any three colours that form an equilateral triangle on the colour wheel. There are four such combinations.

i. Primary triad → Yellow, Blue & Red

ii. Secondary triad → Green, Violet & Orange

iii. Intermediate triad I → Yellow-Orange, Red-Violet & Blue-Green

iv. Intermediate triad II → Yellow - Green, Red - Orange & Blue - Violet.
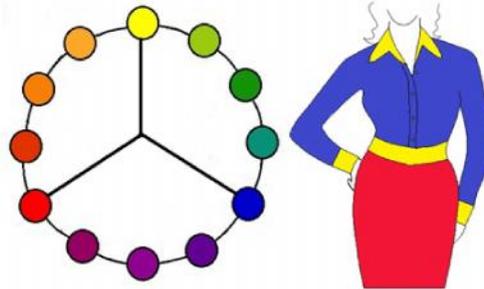
Fig.4.3.15 - Triad Colour Scheme

4.3.5.3. Achromatic Colour Schemes:

The word achromatic have been derived from a combination of two word, ie., 'Achro' means the tones of black and 'Chromatic' means combination of colours. Therefore, achromatic colour scheme can be defined as tints or tones of black or shades of white ie., black, white and various shades of grey comprises of achromatic colour scheme.
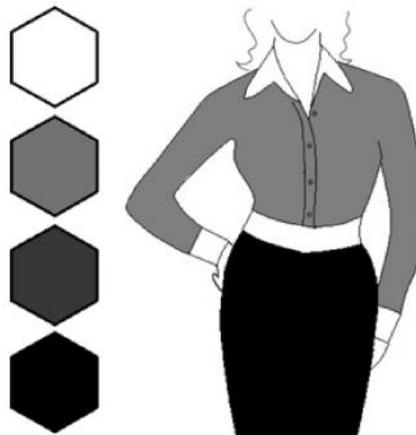
Fig.4.3.16 - Achromatic Colour Scheme

4.3.6. COLOUR SCHEMES IN DRESS

Colour schemes in dressing play an important role. Since they help to bring out their personality. The colour of the clothes worn should suit the wearer, helps to enhance his or her appearance.

a. **Colour and Personality:** The choice of colour in clothes is usually influenced by a person's complexion, age, size, personality and income as well as by the vocation and the season.

• Black is good for formal wear. It tends to be sophisticated.

• Brown is casual, natural and informal.

- Navy blue looks good on almost everyone and is good for sportswear or classic styles.

- White looks good with all other colours.

- Off-white is better for most people than pure white.

- Red, green, and blue have many tints, shades and intensities which make these hues suitable for almost all occasions.

- Yellow is good for casual, fun clothes, but it is not pleasing for many skin tones.

- Bright colours are fun for active sportswear or as accents with neutrals.

b. **Colour and Character:** It may be said that colours are index of character. It is said that if you prefer:-

Purple	-	you are magnetic
Pink	-	you are truly feminine.
Green	-	you are neighbourly.
Yellow	-	you are idealistic.
Red	-	you are passionate.
Blue	-	you are colour competent.
Orange	-	you are sociable.

c. **Colour and Texture:** Lighter shades suit thinner fabrics better than darker shades. Darker shades and colours are becoming in thicker material. Pale lilac may be unbecoming in a heavy khaki cotton sari, but will look charming in nylon or georgette.

d. **Colour and Age:** Young, active and vigorous people can choose clothing of either related or contrasting colour harmony. However, only clothing of related colour harmonies is suitable for use by older persons. Persons past middle age will do well to wear clothing of duller intensities.

e. **Colour and Occasions:** Bright and cheerful colours befit festive occasions, parties or marriages. White, silver, yellow, gold are most suitable for weddings and generally adorn the bridal array. Men use clothing of dark coloured material such as, navy blue, black, associative with sorrow and gayness. Cool colour such as white, blue, green, are refreshing the summer while warm colours such as red, pink orange and yellow, suitable in winter.

f.   **Colour and Light:** Garments to be worn in the day time should be selected in day light. Apparel for evening wear or for night should be viewed under artificial light. Electric light can change red colour to brown, orange to khaki and yellow to acid yellow green.

g.   **Visual Effects of Colour in Dress:** Colours react with each other and the effects they give depend on how light, dark or strong the colours are. Dark, cool and dull colours make objects appear smaller than the same objects in warm, light or bright colours. Warm and bright colours make a form seem larger due the colours' advancing characteristics. Such colours are white, yellow, orange and red. A single colour for an entire outfit makes a person look thinner and taller. When combining two colours in an outfit, special precautions are needed. Sharply contrasting colours appear to shorten the body. This effect can best be used for a very tall person, dividing the top & bottom of the dress. When two hues of identical tones are used together, they cause visual 'clashing'-colours appear to jump around because they both compete equally for attention. This effect is reduced by changing the tone of one or both the colours. In most cases one should not use more than three major colours in an outfit. It is best to use one colour for a large area and another colour or two for smaller areas. Students of Apparel Design need to perceive the light and dark shades of a hue that appear on garments when folded.

4.3.7. COLOUR RENDERING

Color rendering relates to the way objects appear under a given light source. The measure is called the "color rendering index", or CRI. A low CRI indicates that the objects may appear unnatural under the source, while a light with a high CRI rating will allow an object's colors to appear more natural. For lights with a "warm" color temperature the reference point is an incandescent light.

The amount of light and shade included in drawing is part of the whole structure of the work. It is the use of light and shade that creates illusionary three dimensional resulting in a sense of volume. When one has to express the volume of something, two things which are to be noted are:

Fig.4.3.17 - Shadow

- The shade which falls on the object

- The shadow the object creates on another surface i.e. the cast shadow
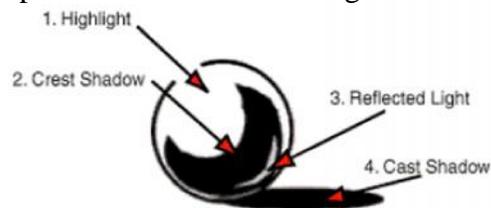
Black and White

The term 'Black and White' refers to a special kind of drawing which uses the white of paper and black of lines without any intermediate tone of grey. It requires tremendous skill to master the technique. Since black and white drawings clearly define outline and solid areas, they are suitable for lithographs (a process which maintains the clarity of the line and uniformity of the tone). Pen and ink is suited for this technique because of the clarity of lines.

Fig.4.3.18 - Black & White

Light and Shade

One can use repeated strokes, half toned or bending or can choose between the texture of a soft or medium grade charcoal pencil, crayon graphite or any kind of black pencil. Light and shade can be rendered with simple pencil strokes. While shading an object, the shape of the shade should be considered and filled with hatching (Cross hatching created by strokes crossing in different directions), dots or SFUMATO (a technique of creating a shadowy and smoky tone which covers the form of a figure).It gives body to image and brings out the unseen sides of the object. Whereas drawing cast shadow detaches the object from the surface. Using charcoal can give an instant tonal effect by blending the hard outline with a finger or paper stump. There is more carbon on a graphite lead and is softer.
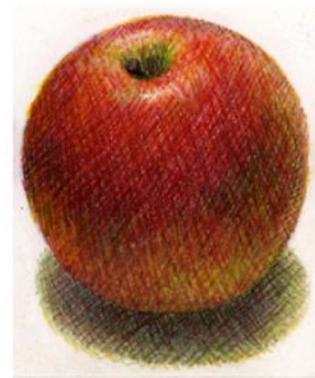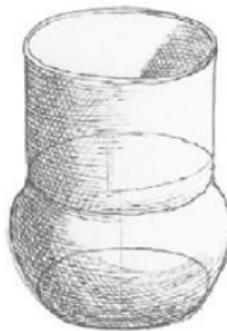

Fig.4.3.19 - Cross hatching

When light and shade effects are combined into a drawing, the subject is given a three dimensional form by interpreting the relationship between various degrees of brightness and darkness.

In black and white drawings the impression of light is conveyed with contrasting areas of shade.

- When one wants to draw reflections, dark areas can receive light from the brighter areas nearby.

- One can emphasize the reflected light within the cast shadow by making them darker on the edge and lighter close to the subject.

- One can increase the depth and volume by showing the lightness and transferring it on the surface of the subject. (for example , without light, a horizontal plane such as a floor appears vertical and upright as a wall)

Fig.4.3.20 - Shading

In a monochrome, one can convey the natural passage of tone from light to dark in numerous ways:

- By Sfumato/smudging technique wherein blurring the hard edges of the outline so that it makes an indistinct margin between light and dark.

- By Cross hatching technique wherein strokes and dots are used with the help of grainy paper surface to create interesting passage from light to dark.

Fig.4.3.21 - Colour Shading - Object

- After defining the shapes of the subject by means of an outline, draw shapes of dark areas and cast shadows. Emphasize the shade separator (the line that divides the illuminated area and the dark area). Cast shadows are generally darker than shaded areas.

- Network the darkest point. One must take care not to draw the darkest area too heavily at first but to shade them little by little. The dark areas should have the same transparency as the lighter ones to convey effects of reflection.
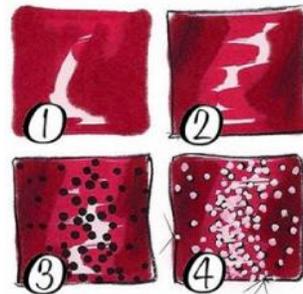

Fig.4.3.22 - Colour Shading - Fabric

Fig.4.3.23 - Colour Shading

- Shade and shadow look darker near the edges because of the light reflected on to their inner areas.

4.3.8. PRACTICAL

1. Basic Hues

   Prepare a chart showing basic hues.

2. Value scale

   Prepare values scale of any hue.

3. Primary Colours

   Prepare a chart of primary colours.

4. Secondary Colours

   Prepare a chart of secondary colours.

5. Prang Colour Wheel

   Illustrate prang colour wheel

6. Illustration of Colour Schemes

   Illustrate the following colour schemes in garments.

   a. Monochromatic

   b. Analogous

    c.   Direct Complementary

    d.   Split Complementary

    e.   Double Complementary

    f.   Triad

    g.   Neutral Colours

7.   Colour Rendering

       Illustrate the colour rendering in garments

4.3.9. ASSESSMENT ACTIVITIES

1.   Assignment

2.   Practical activity

3.   Class Test

4.   Puzzles

5.   Work diary

6.   Portfolio

TE QUESTIONS

1.   Explain the properties of colours.

2.   Draw Prang Colour Wheel.

3.   Suggest any four colour schemes for a 3 year old girl child.

4.   Illustrate direct complimentary and split complimentary colour schemes.

5.   Explain the importance of colours in dress designing.

6.   List the factors to be considered while rendering colour to an object.

UNIT - 4.4
FASHION ILLUSTRATION

4.1.1. INTRODUCTION

Fashion illustrations are the drawings or paintings which illustrates the ideas and concepts of a garment by its designer. The ability to present/express/detail a three dimensional dress into a two dimensional sketch, which will clearly express the details and uniqueness of apparel is what is meant by illustration. Fashion illustration illustrates fashion apparel as well as accessories used along with the garment.

4.1.2. LEARNING OUTCOMES

The learner:

- Differentiates normal human figure and fashion figure
- Illustrates 10 head theory
- Illustrates different poses of fashion figure – Stick Figures
- Illustrates different poses of fashion figure – Block Figures
- Illustrates different poses of fashion figure – Flesh Figures
- Illustrates the face / head.
- Illustrates the different hairstyles
- Compares the different types of necklines used in garments.
- Illustrates the different types of neckliness used in garments.
- Compares the different types of collars used in garments.
- Illustrates the different types of collars used in garments.
- Compares the different types of sleeves used in garments.
- Illustrate the different types of sleeves used in garments.
- Compare the different types of skirts used in garments.
- Illustrate the different types of skirts used in garments.
- Compare the different types of trousers used in garments.
- Iillustrate the different types of trousers used in garments.

4.1.3. FASHION ILLUSTRATION

Fashion Illustration is considered as the most fundamental component of Fashion Design. It is used to present the design ideas. Fashion illustration can be presented through many forms and textures with plenty of creative themes and impressions. It begins with the sketching of a croquis, the extra notation of the garment, and also

technological, before it is produced. Fashion illustration on a figure is widely used by designers, fashion prediction or making companies, fashion magazines and trade journals and students. In fashion industry, the fashion illustration is used to show the following information:

- A mood or feeling which is relevant to current fashion.
- A total look of the garment and wearer including the styling of pose, face, hair, hands, feet and garment design.
- Use of colours and fabric combinations in a design or garment.

4.1.4. FASHION FIGURE – 10 Head theory

A *croqui* which has ten-headed figure outline, is the basis of fashion illustration. **The method of creating Croquis is: Stick Figure → Contour figure → female or male Croqui.** To create **Croqui**, first we have to choose perfect textured **sketch book** which should not have smoother surface, then all croqui handouts, ruler, pencils, coloring tools. The purpose of using "ten head" theory of Fashion Illustrations are to identify the figure exactly.

Here the total body length is divided in to ten heads. One head is taken as 1½". (Some drawings one head is equal to 1" or 2"). All other parts are proportionate to this measurement. In following figure 1 head = 10 blocks = 1¼" and 1 B = ⅛

1. Draw a central balance line about 15 ¼ " (0 – 11).
2. Divide the line into 10 equal sections with 1¼" and mark 0 – 10 to each section.
3. **Head Block** (Point 0 to 1)
   0 – 1 = 10 B (1¼")
   a – 0 = 0 – b = 3B (⅜)
4. **Neck Block** (Point 1 + 4B down)
   e – f = g – h = 2 B (¼")
   e – g = f – h = 4B (½")
5. **Shoulder Level** (2B down from neck block)
   6 B (¾") downwards from point 1
   i – j = 7B + 7B = (⅞ ")
6. **Bust Level** (at point 2)
   k – 2 = 2 – l = 6B (¾")
7. **Waist Level** (at point 3)
   m – 3   = 3 – n = 4B (½")
8. **Waist Curve** (4B down from point 3)
   o – p = 4 ¼ B + 4 ¼ B = (1 $^{1}/_{16}$")

9. **Hip Level** (at point 4)

   q – 4   = 4 – r= 6B (¾")

10. **Crotch Level** (5B down from point 4)

11. **Knee Level** (half way between point 6 and 7)

   s – t = 4 B + 4 B = (1")

12. **Knee Curve** (point 7)

   u – v = 4 ½ B + 4 ½ B = (1 ⅛ ")

13. **Ankle Level** (2B down from point 9)

   w – x = 2 B + 2 B = 4B (½")

14. **Feet Level** (at point 10)

   y – 10 = 10 – z = 4B (½")

15. **Toes** (2B down from point 10 / point 11).
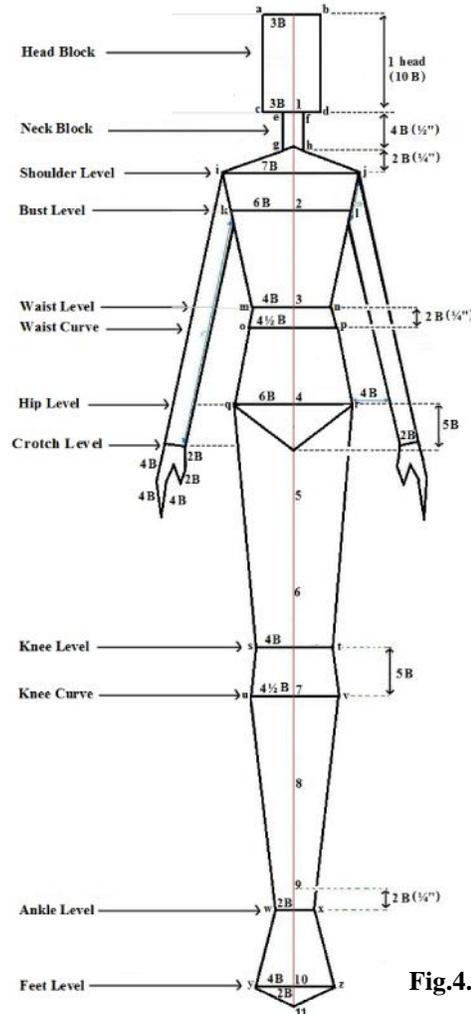
Fig.4.4.1 – 10 Head Croqui
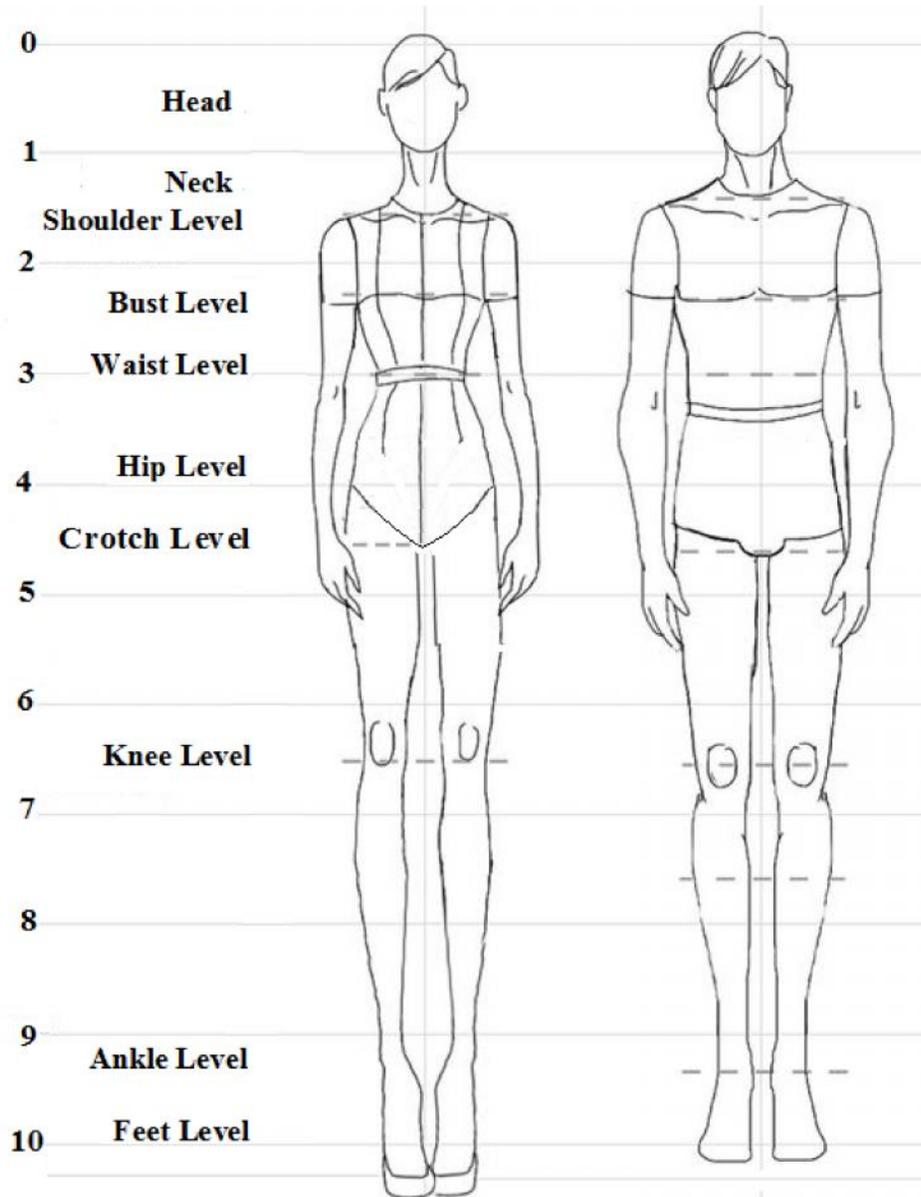
Fig.4.4.2 - 10 Head Croqui Male & Female

4.1.5. Fashion Figure – Stick Figure

These figures are the basic outline of three important components of croqui – balance line, hip line and shoulder line. To draw the stick figures:

1. Draw the balance line from neck to ground , it should be straight.
2. Add the shoulder and hip line.

3. Draw loose swipes to represent the movement of the figure.

4. Outline the the body shape – chest, waist, hip
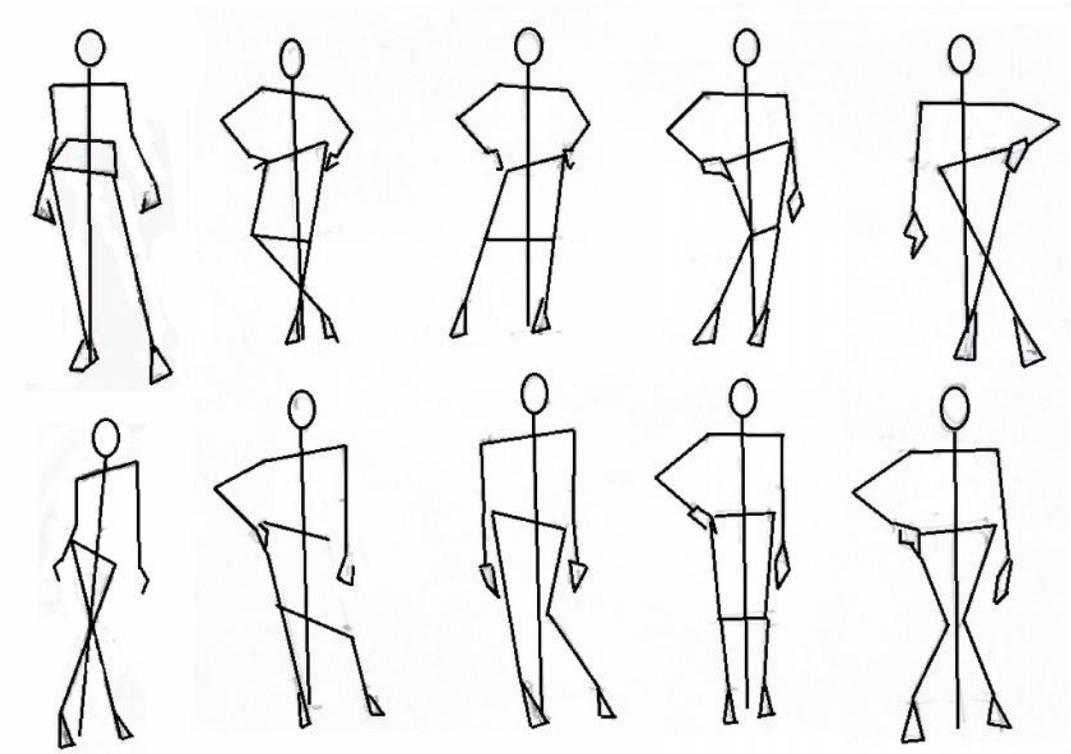
Fig.4.4.3 - Stick Figures - Different Poses

4.1.6. Fashion Figure – Block Figure

Drawing block figures are the next step to develop fashion figures. Shape the stick figure into blocks of body parts.

1. Fill the body blocks or shape – chest, waist, hip

2. The body has two major solid sections with a soft spot in between. The shoulders and the rib cage are one section, and the hip bones form the other.

3. Draw simple trapezoidal shapes to represent each section, centre on the spine.

4. Draw shapes for the hands. Hands hang at about crotch level, at the centre mark. Elbows hang at the fourth mark, aligned with the navel.

5. Draw oval shapes to represent the thighs and calves
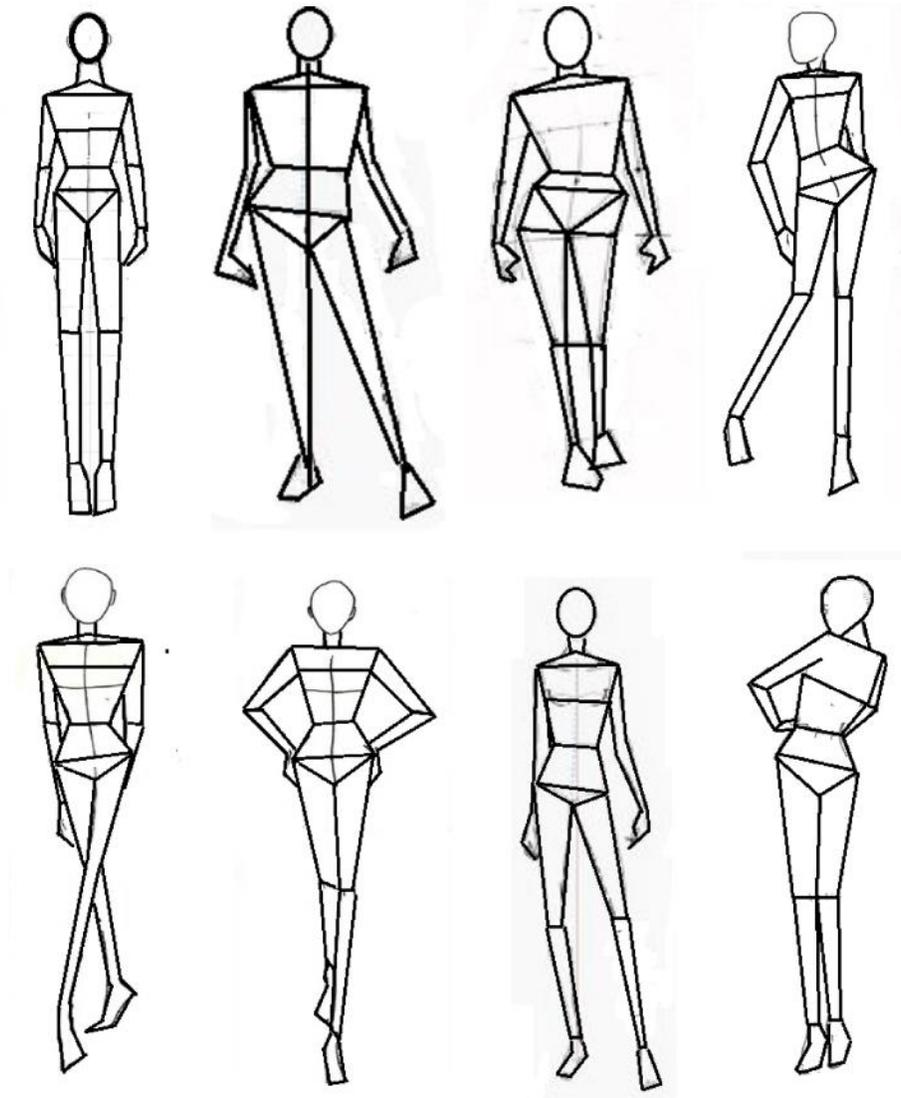
Fig.4.4.4 - Block Figures - Different Poses

4.1.7.　　　Fashion Figure – Flesh Figure

Final step in drawing croqui are fleshing out.

1.　Shape the curves in the body according to male and female body structure.

2.　Draw an oval for the head in the top section.

3.　Draw hands, feet, face and at the end finish by drawing hair.
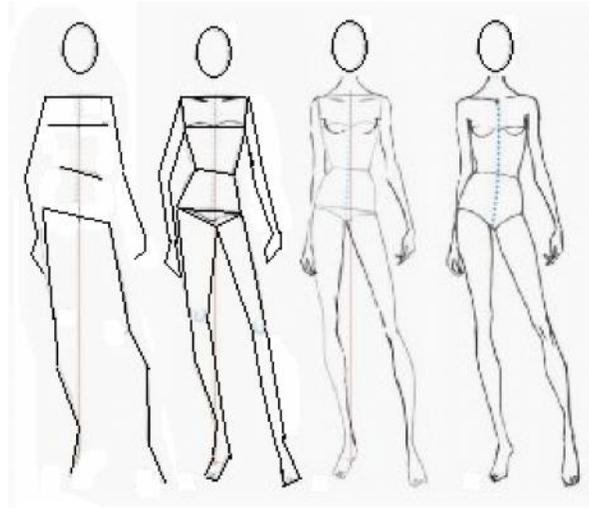
Fig.4.4.5 - Flesh Figures - Female
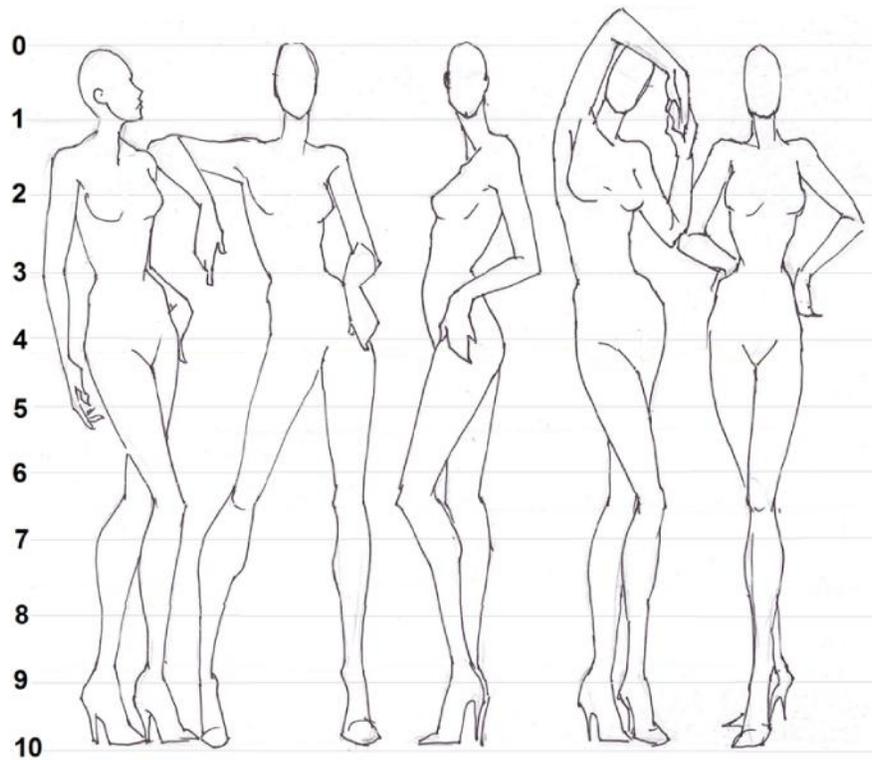
Fig.4.4.6 - Flesh Figures - Different Poses - Female
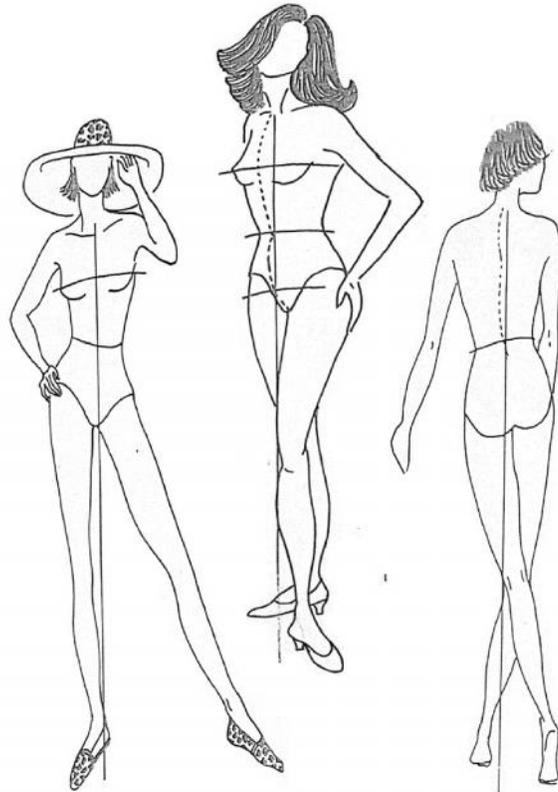
Fig.4.4.7 - Flesh Figures - Different Poses - Female
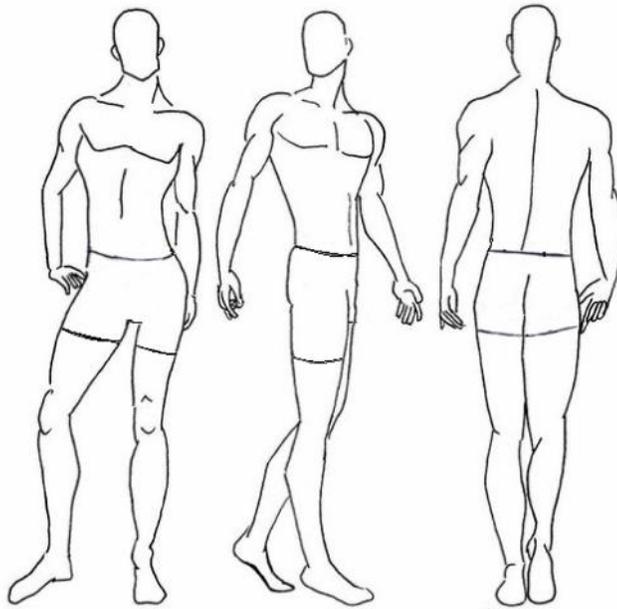
Fig.4.4.8 - Flesh Figures - Different Poses - Male

4.1.8. Figure Detailing

Figure detailing includes illustration of different body features like head, face, hand, leg etc.

4.1.8.1. Head and Face

Draw the basic oval shaped head in a block measuring a 'head'. Eyes in the fashion face are glamorously elongated and emphasized. Fashion eyes are shaped with one eye length between the eyebrows. Add details such as eye lashes and spot highlights in the pupil as a last touch. The ears are oval with its top slanted towards the back of the head. The basic shape of nose is triangular wedge and round at the tip of the nose. The width of the nose is equal to the width of the eyes. When drawing lips, the top lip is smaller than bottom one. The positioning of mouth is directly below the nose. Curves of the mouth projects moods or attitude.
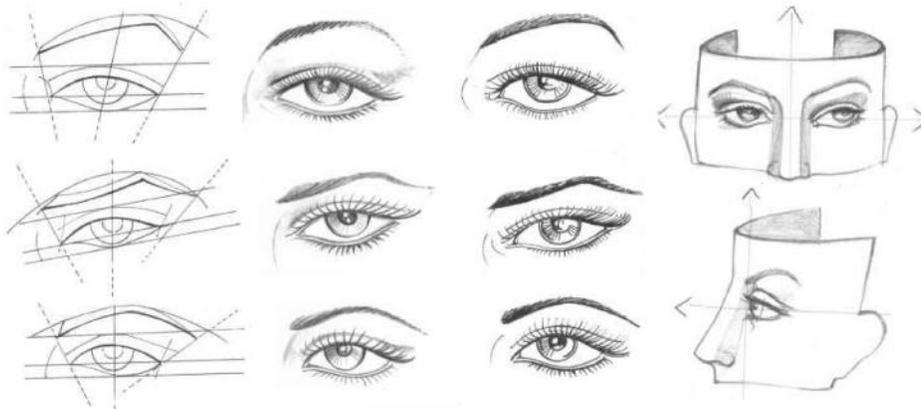
Fig.4.4.9 - Figure Detailing - Eyes

Fig.4.4.10 - Figure Detailing - Ears
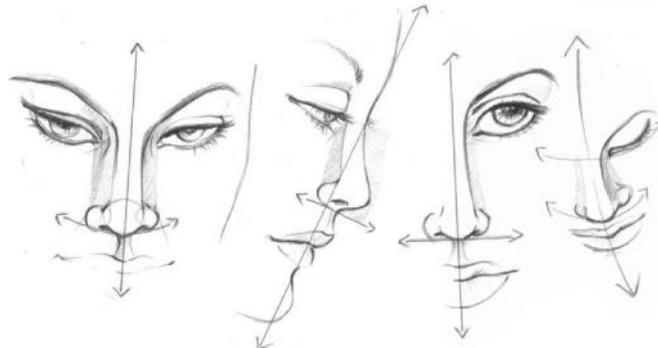
Fig.4.4.11- Figure Detailing - Nose

Front View   Side View   Three-quarter View
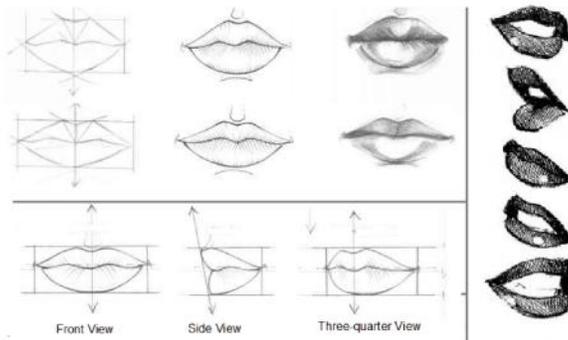
Fig.4.4.12 - Figure Detailing - Lips
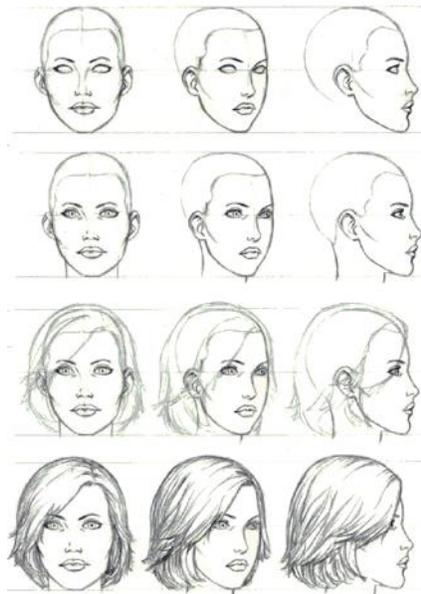
**Fig.4.4.13 - Figure Detailing - Female Head**
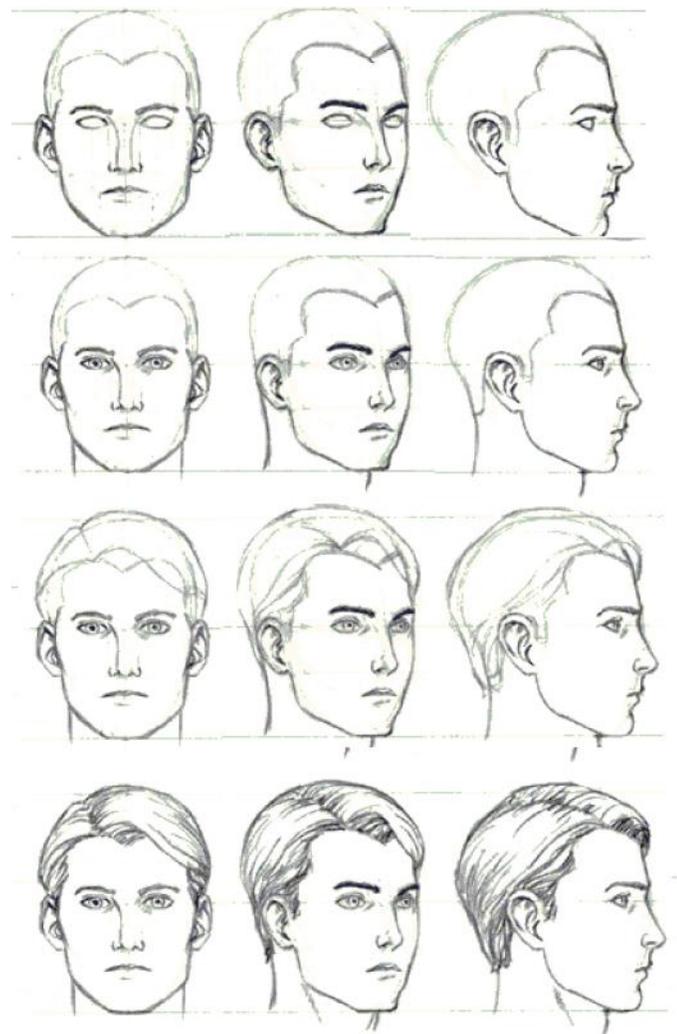
Fig.4.4.14 - Figure Detailing - Male Head

4.4.8.2. Arms / Hand

The arm is the upper limb of the body and is made up of four moving parts: shoulder, upper arm, forearm and hand. Fashion figure has elongated arms. It has two equal parts – shoulder to elbow and elbow to wrist. Width of hand gradually reduces from shoulder to elbow. It widens below the elbow and then reduces.

The upper arm extends from the shoulder to the waist, the forearm from the waist to the crotch line. The hand extends approximately halfway down the thigh.
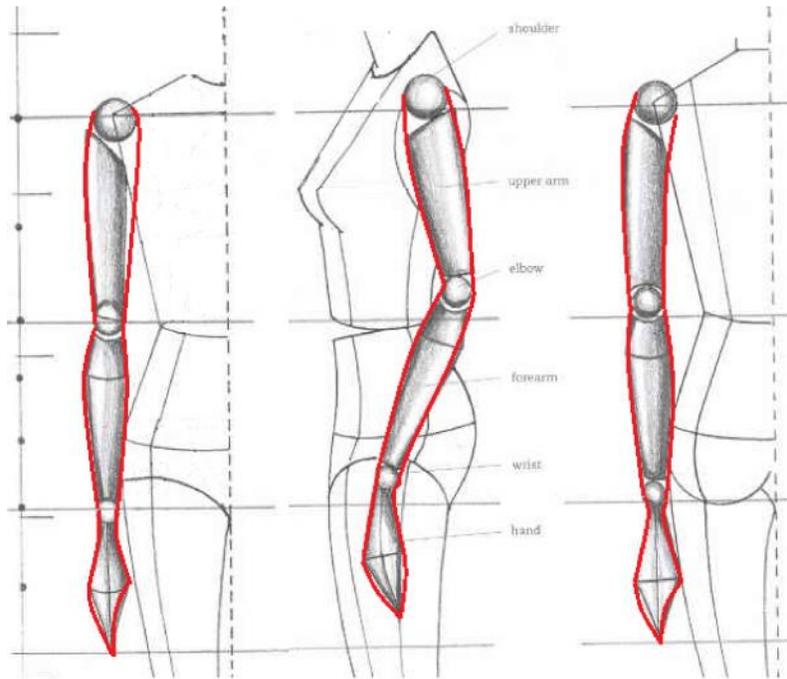
Fig.4.4.15 - Figure Detailing - Arm
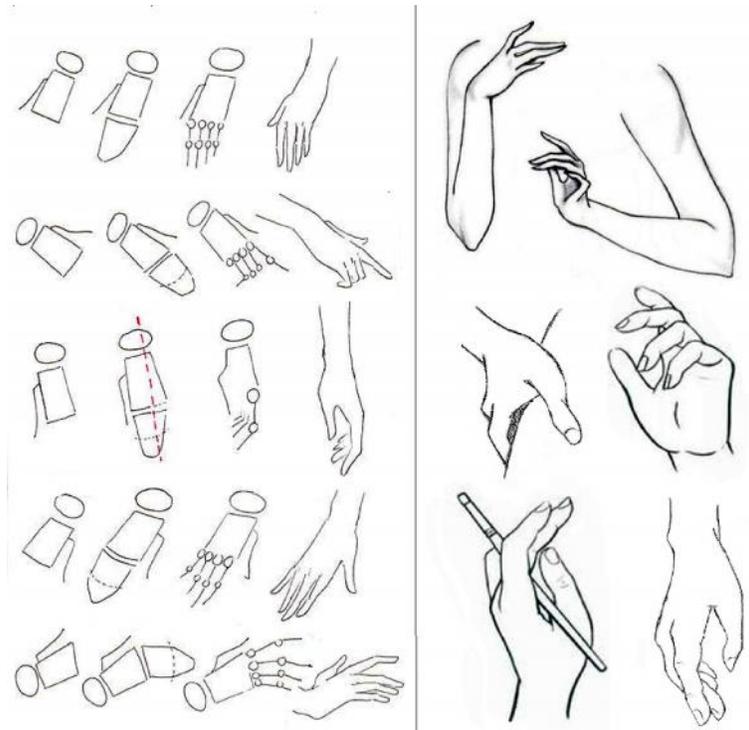
Fig.4.4.16 - Figure Detailing - Hand

4.4.8.3. Leg / Feet

The leg is the lower limb of the body. Proportionately the leg, including the foot, has a height of approximately four units of measure of the overall figure. Structurally the limb is made up of three moving parts: the thigh, the leg and the foot, which are connected by the joints of the hip, the knee and the ankle.

The Length of the thigh is equal to that of the lower leg. In the first and third drawings (front and back views), the rhythmic structure assumes a curved aspect which starts from the hip joint going as far as the centre of the knee, then it descends vertically to the inside of the foot. Unlike the hand, the foot is more closed and compact and its wedge-like shape and broad sole ensure that the foot functions as a support for the body. Structurally it consists of four main parts: the heel, the two malleoli (projections on either sides of ankle), the bridge of the foot and the five toes.
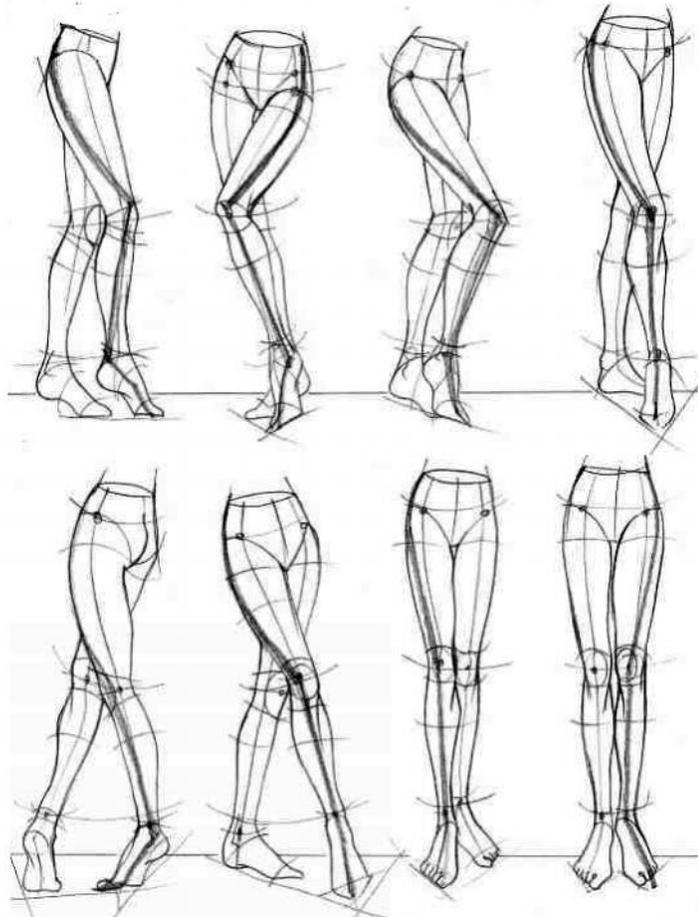
Fig.4.4.17 - Figure Detailing - Leg
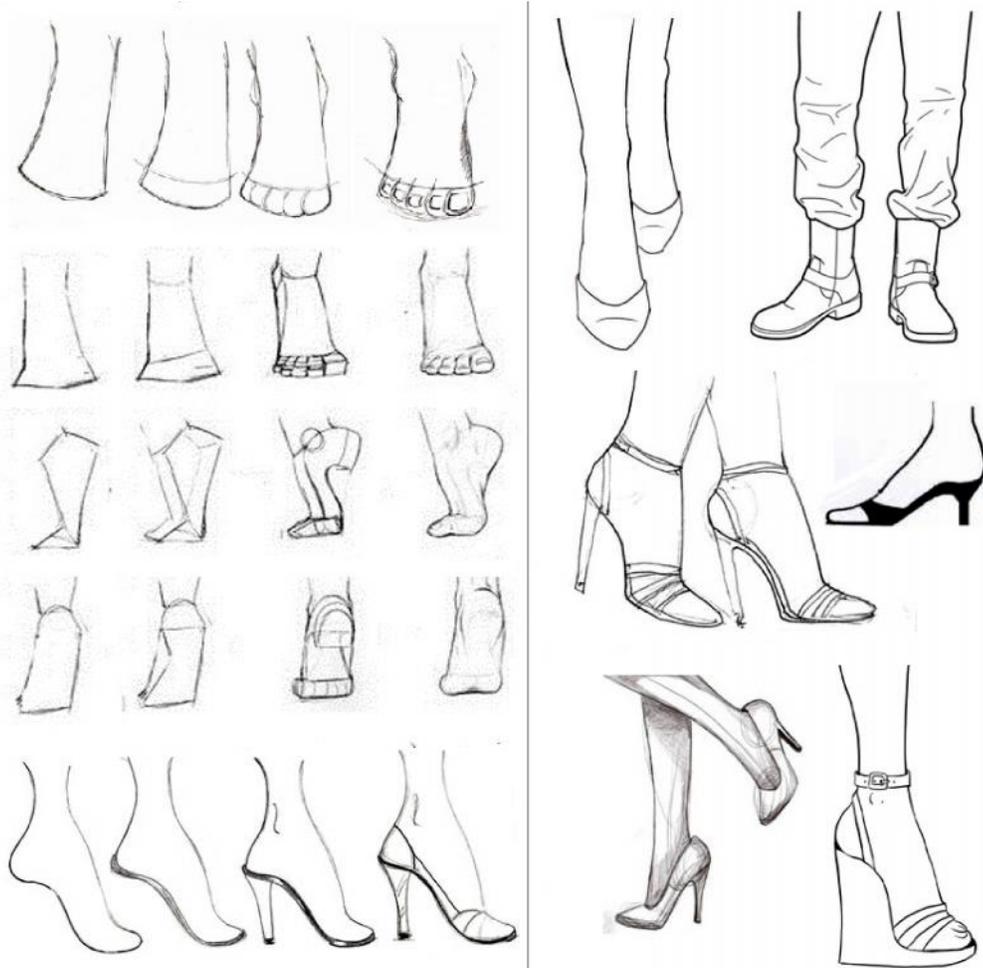
Fig.4.4.18 - Figure Detailing - Foot

4.4.9. Illustration of hair styles
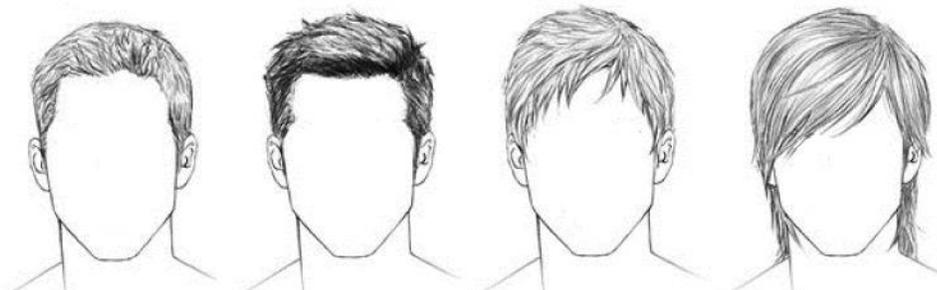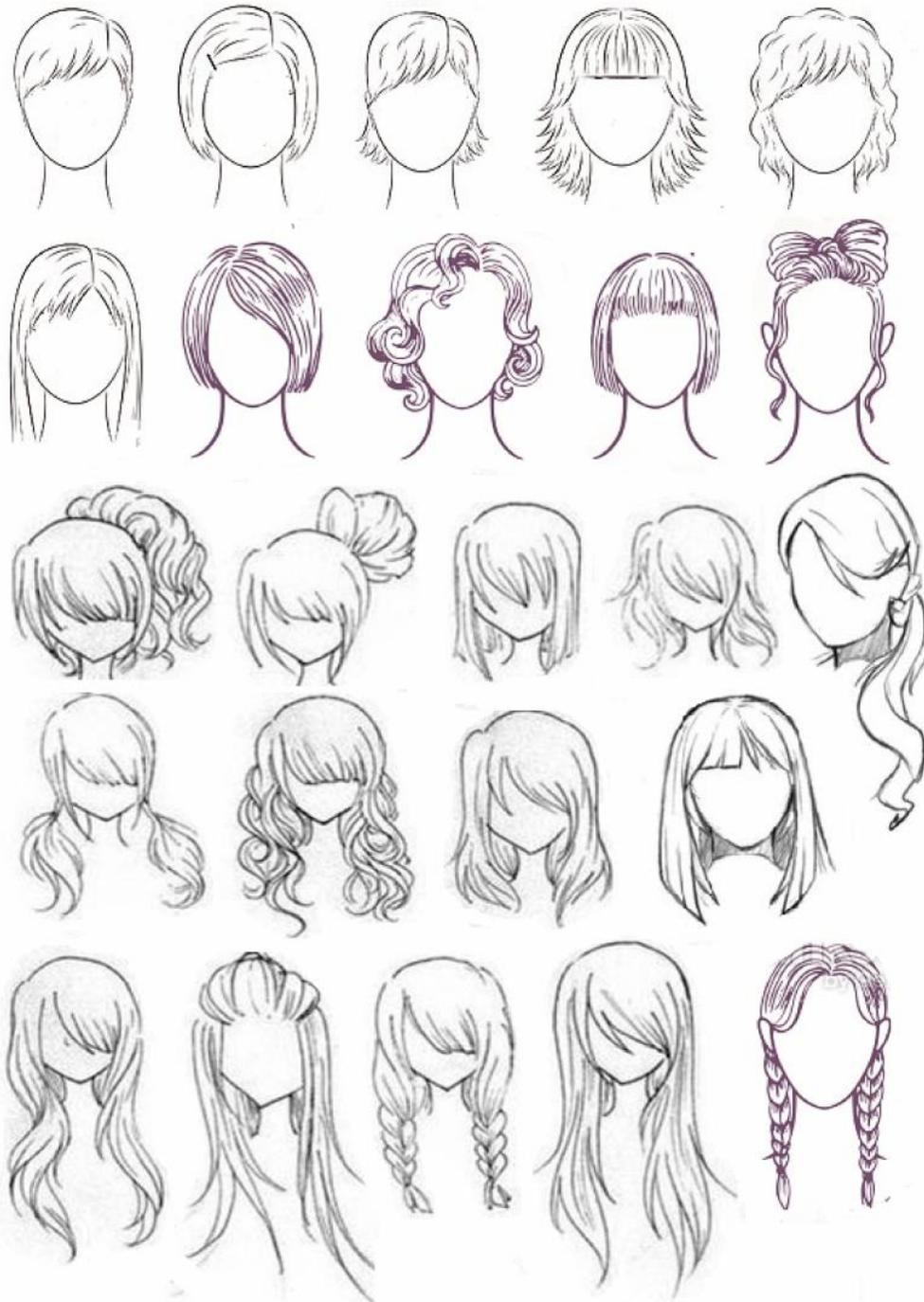
Fig.4.4.20 - Hair Styles - Female

4.4.10. Types of Necklines
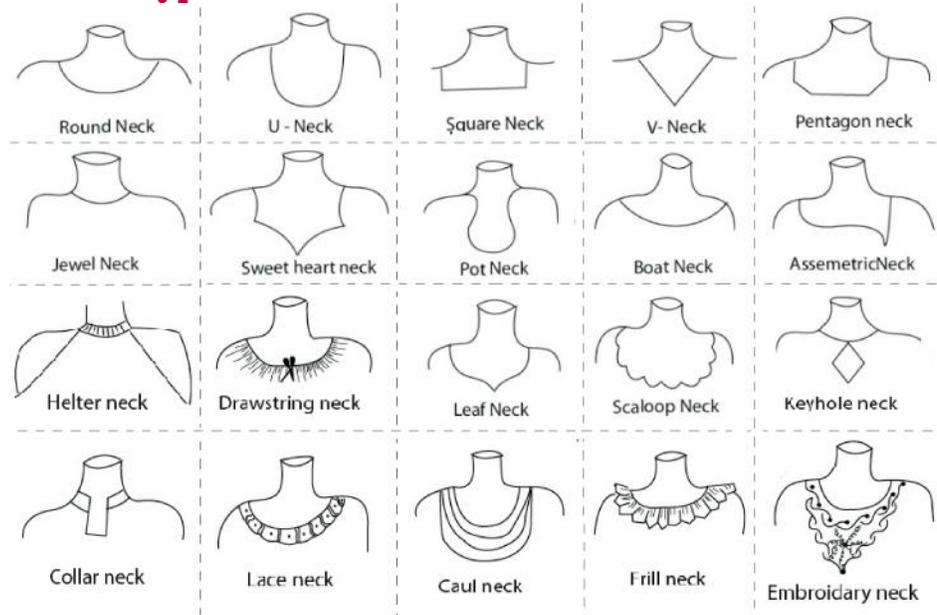
Fig.4.4.21 - Necklines

4.4.11. Types of Collars

Fig.4.4.22 - Collars

4.4.12. Types of Sleeves

CAPE   PUFF - TOP   PUFF   PUFF – BOTTOM   PETAL   MAGYAR

LEG-O-MUTTON   BISHOP   RAGLON   PESANT   JULIET   VIRAGO

PAGODA   DOLMON   FLARE   BELL   LONG BELL   KIMONA
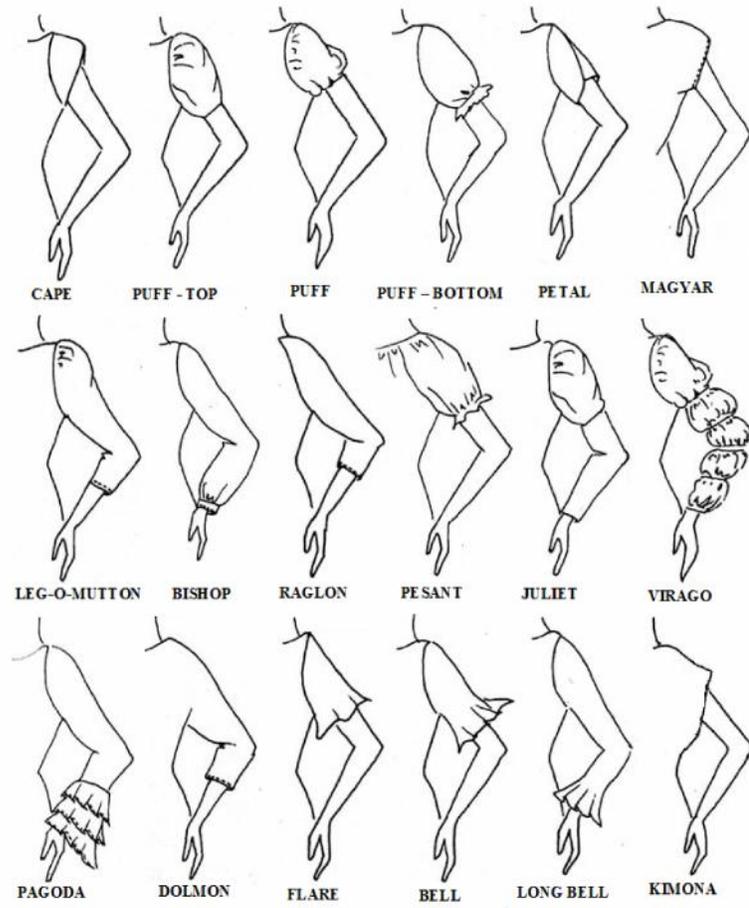
Fig.4.4.23 - Sleeves

4.4.13. Types of Trousers

Straight Pants   Hipsters   Bellbottom   Harems   Shorts   Threeforth

Fig.4.4.24 - Trousers

4.4.14. Types of Collars

STRAIGHT   A – LINE   SHEATH   4 PANEL SKIRT   8 PANEL SKIRT

CIRCULAR SKIRT   COWL SKIRT   TRUMPET SKIRT   SARONG

LAYERED SKIRT   TULIP SKIRT   ASYMETRICAL SKIRT   GODET SKIRT
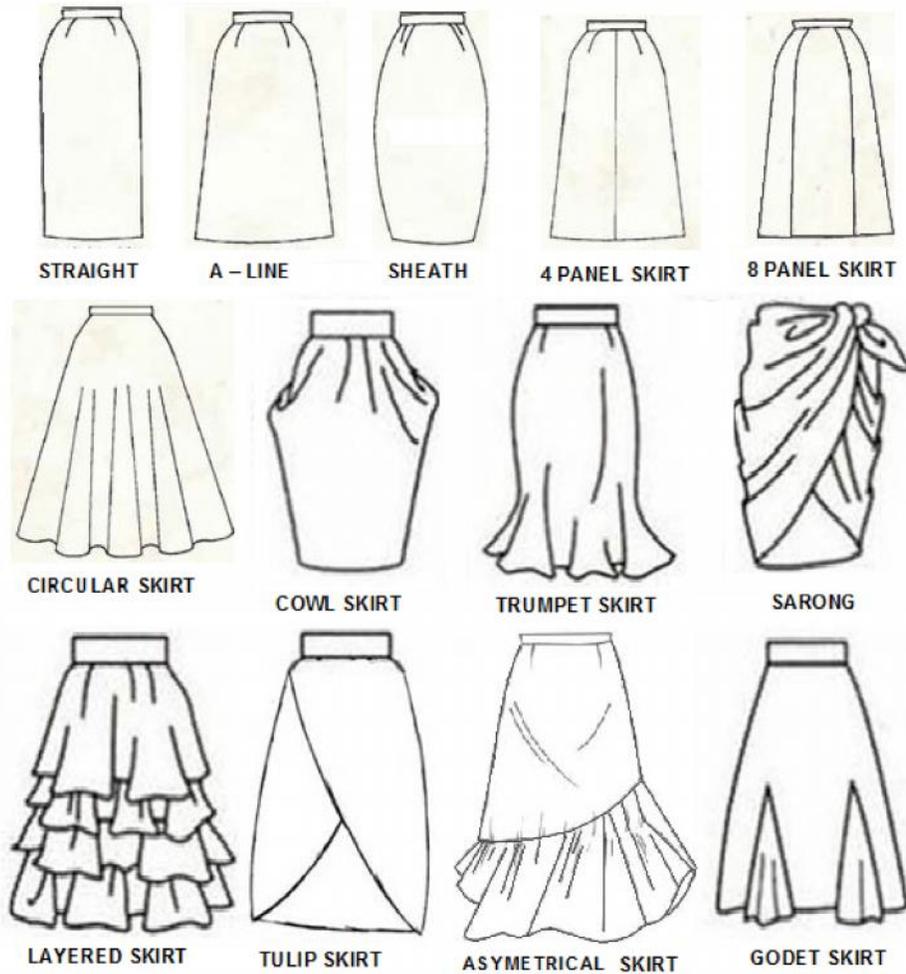
Fig.4.4.25- Skirts

4.4.15. Practical

1. Illustration of 10 head fashion croqui.
   Draw a 10 head croqui figure.
2. Illustration of different poses of female fashion figure.
   Different poses – Front, ¾ th (Oblique) and back (Stick, Block and Flesh)
3. Illustration of different poses of male fashion figure.
   Different poses – Front, ¾th (Oblique) and back (Stick, Block and Flesh)
4. Figure detailing – Head
   Draw head / face with details.
5. Illustration of Types of Hair Styles
6. Illustration of Types of Necklines

7. Illustration of Types of Collars
8. Illustration of Types of Sleeve
9. Illustration of Types of Skirt
10. Illustration of Types of Trousers

4.4.16. Assessment Activities

1. Assignment
2. Seminar
3. Project Work
4. Practical activity
5. Work diary
6. Portfolio

4.4.17. TE Questions

1. Illustrate 10 head fashion croqui.
2. Illustrate different poses of female fashion figure.
3. Explain the different types of necklines with example.
4. Compare the following types of sleeves
   a. Cape Sleeve   b. Bell sleeve c. Raglan Sleeve
5. Illustrate any skirt for a college going girl.

UNIT - 4.5
DESIGNING AND PORTFOLIO DEVELOPMENT

4.5.1. INTRODUCTION

Fashion designing is the process of developing new designs according to the trends in fashion by a creative designer. These designs are illustrated through different sketches and boards. The design portfolio development is explained in this unit.

4.5.2. LEARNING OUTCOMES

The learner:

- Defines apparel designing.
- Identifies and define the different boards in a fashion portfolio
- Describes how to create different boards in a fashion portfolio.
- Visualizes and present a theme by taking inspirations for designing.
- Develops a fashion portfolio.

4.5.3. DESIGNING

Fashion designing is the process of developing clothing, apparel and its accessories. Apparel designing and manufacturing is mainly focused on the production of garments. Apparel designing is the art of creating apparels or garments.

Apparel designers, also called clothing or fashion designers, conceptualize and create items of clothing. They often specialize in one type of design, such as casual, evening or active wear. Common duties include tracking current fashion trends and predicting future ones, sketching new designs, selecting patterns and fabrics to use in garments and overseeing production. They may then show items to clients or retailers, depending on if the garments are to be custom designed or mass produced.

4.5.4. FASHION PORTFOLIO

Portfolio is an expression of one's creativity, design, ability, technical expertise, and illustration and presentation skills. It exhibits the designer's inclination towards a particular segment of the industry by identifying the target customers, design requirements and pricing. The designing process includes the developing of different boards which helps in the production of final garment. Different boards developed during the designing process are described here.

4.5.4.1   **Client Board :** This board gives the details such as age group, season, target market and exact or approximate costing of the line etc. The layout of these sheets could be changed as desired by the designer. An image of the customer is also frequently included to show the customer " type" and targeted market.

4.5.4.2   **Theme / Mood Board:** Theme board, also known as mood or concept board, is the page that tells the designer's story. It is designed on the basis of an idea, object, story, incident etc. It contains anything that sparks the designer's creativity process. Fashion designers mainly use a variety of photographic images to get inspired to work on every line of new collection. The selection of colour, fabrics, prints and silhouette will be inspired by the theme of the mood board.

Fig.4.5.1- Client Board &   Theme Board

4.5.4.3   **Inspiration Board:** These boards take start from a source of inspiration. This specific expression of designs or ideas developed on the basis of the theme / mood board. This board comprises the visual pictures in the form of cutouts, photographs or natural items that are collected and pasted in the form of a board.

4.5.4.4   **Colour Board:** After the inspiration board has been formulated, a visual presentation of colours in the form of swatches, write up, pantone chips etc is done. Pantone contains standard colours, which are numbered. This number is indicated along with the colour for accuracy in colour shade and tone.

Fig.4.5.2-Inspiration Board & Colour Board

4.5.4.5   Fabric / Swatch Board: This contains fabric swatches. Swatches are cuttings of fabrics indicating the selection of fabric to be suitable for garment style. Swatches could be a small clipping or could be large enough to show a print repeat, embroidery details or trims.

4.5.4.6   Trim Board : This board gives the details of trims and accessories (lace, thread, buttons, zipper etc.) that can be used in the garment. It can be depicted through pictures or samples.

Fig.4.5.3-Swatch Board, Trim Board & Accessories Board

4.5.4.7   Accessories Board: This board includes the pictures or photographs of accessories that can be used with the designed garment such as bags, chapples, jewels etc.

4.5.4.8   Illustration Board / Design Board: The illustration board talks of fashion drawings of human forms (women, men or kids) with garments rendered on them. This rendering of garments on the figure sketches

create an element of interest. Illustrations could be hand rendered or worked on the computer using latest software like Adobe Photoshop, Illustrator, etc.

Fig.4.5.4-Illustration Board

4.5.4.9   Spec Sheet (Flat Drawing and Measurements): Flats are miniature drawings of garments when drawn flat on table. On the design sheets, it is important, to indicate flats or specification drawings. Generally both the front and back view of the design is done for complete visualization. It also indicate the measurement required for production.
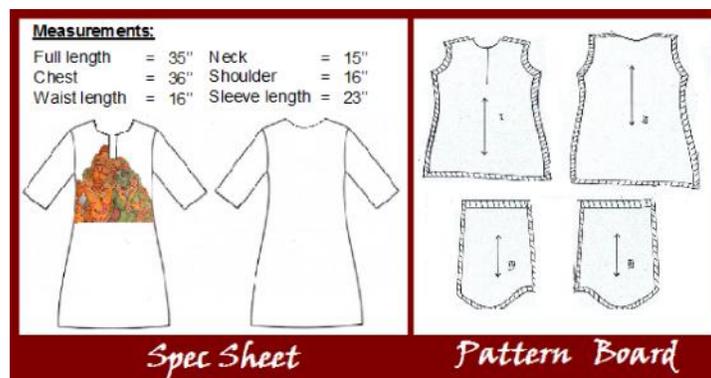
Fig.4.5.5-Spec Sheet & Pattern Board

4.5.4.10   Pattern Board: The patterns of different parts of the garment is illustrated in this board.

Fig.4.5.6-Final Garment

4.5.5 PRACTICAL

1. Develop a Fashion Portfolio.

2. Develop the different design board according to the design and requirement.

4.5.6 ASSESSMENT ACTIVITIES

1. Assignment
2. Seminar
3. Project Work
4. Practical activity
5. Class Test
6. Work diary
7. Portfolio

4.5.7 TE QUESTIONS

1. Explain the different boards in a fashion portfolio.

2. Write about the importance of inspiration board in a fashion portfolio.

3. List the information we get from a client board and spec sheet.

UNIT - 4.6

FASHION MERCHANDISING AND BOUTIQUE MANAGEMENT

4.6.1. INTRODUCTION

Fashion merchandising is practically combining, marketing and advertising with the creative and imaginative talents of fashion professionals. Fashion merchandising need to analyze changing market trends, oversee production cost, supervise sales and create rise in income. Merchandisers are some of the most powerful employees within an apparel company, and they have large bottom line and personal management responsibilities.

Boutiques are small specialized shops which are mushrooming in modern society, They cater to the demands of elite urban society. As these two areas are gaining popularity day to day, these topics are detailed in this chapter.

4.6.2. LEARNING OUTCOMES

The learner:

- Defines fashion merchandizing.
- Identifies and explain the duties and responsibilities of a fashion merchandiser.
- Identifies the career prospects of fashion merchandising.
- Explains term visual merchandising
- Develops skills for visual merchandising
ü Defines the term boutique
ü Identifies and explain the working of a boutique.
ü Develops the skills required for managing a boutique.

4.6.3 FASHION MERCHANDISING

Fashion merchandisers are also known as a Merchandiser or Apparel Merchandiser. Fashion merchandising is a profession that incorporates the A-to-Z processes in the fashion business ranging from producing, product development, promoting and buying and selling fashion items such as clothing, accessories, jewellery, cosmetics and shoes.

4.6.4. DUTIES AND RESPONSIBILITIES OF A FASHION MERCHANDISER

1. A fashion merchandiser may work for a textile manufacturer, a designer or a fashion retail outlet such as a department store, children's clothing store or a discount store.

2. He or she is well-versed with the fashion industry as well as the socio, cultural and economic aspects of textile production.

3. A fashion merchandiser is required to be in touch with market trends, fashion updates as well as popular preferences in a particular locality.

4. The job can be rewarding offering ample opportunities to work in the glamorous fashion world and with popular fashion brand names.

5. Like all professions, the salaries of fashion merchandisers increase according to experience and qualification. The highest earnings for professionals who are in this field are those who have climbed the ladder from fashion display artist, designers or assistants to management or executive levels.

6. Depending on which industry a fashion merchandiser works in, the job titles associated with this field include fashion buyers, fashion directors, retail store managers, textile merchandisers, designers, showroom sales representatives, product development managers, catalogue production managers, event Planner, Window dresser, fashion promotion specialist and merchandise display artists.

7. The job responsibilities of a fashion merchandiser are varied depending on the kind of fashion business one is in.

8. A fashion merchandiser is required to have an incredible amount of creativity and flair for fashion, often contributing inputs and opinions on market trends and latest fashion directions.

9. When working for textile manufacturers, fashion merchandisers are involved in the manufacturing processes of textile materials, which include the whole amount of delivering production capacity, quality control and management of workers.

10. A fashion merchandiser can also work in department stores or clothing outlets as a fashion designer, fashion buyer, catalogue production managers or merchandise display artists.

11. Store decoration and merchandise displays are also the responsibilities of fashion merchandisers where the latest apparels and items are displayed prominently to align with the store's branding and image.

12. Efficiently track store profits.

13. A good fashion merchandising professional must be resourceful, creative, confident, imaginative, and full of ideas.

14. In order to succeed in this field, a fashion merchandiser should have good judgement and must be willing to take risks.

15. Highly skilled fashion merchandising professionals are capable of assessing the changing needs of the consumers, predicting new style trends, and conceptualizing superb promotional campaigns.

4.6.5. VISUAL MERCHANDISING

Visual Merchandising is purely aesthetics of science and it's the backbone of retail industry. Visual Merchandising plays a highly major role in retail industry. Nowadays, Visual Merchandising became one of the major tools of business promotion which is widely used to attract customers and increase sales. Visual merchandising commonly occurs in retail spaces such as retail stores and trade shows.

Many elements can be used by visual merchandisers in creating displays including colour, lighting, space, product information, sensory inputs (such as smell, touch, and sound), as well as technologies such as digital displays and interactive installations. As methods of visual merchandising can be used colour and style, symmetry and rhythm, face and side presentation etc. To capture the attention of the customer, the retailer must consider the customer's needs during this process. Factors that contribute to the overall in-store design include; the store layout, store design, point of purchases displays, item display, assortment display and signage. When applied successfully to a store, these factors can meet the needs of the consumer and provide a positive in-store purchasing environment.

Mannequins are used by apparel retailers to display their products in-store and in the window display. They are a tool used to show consumers what their products look like on a person. Visual merchandising consists of mainly two techniques - interior and exterior displays, also known as in-store design and window displays. The most common forms of store layouts include:

1. **A grid layout** is generally organized in a rectangular shape, which allows customers to shop quickly and maximize shop floor space, ideal for a supermarket or hardware store.

2. **A racetrack layout** ensures that the consumer only follows one path when browsing the store. This is beneficial in the sense that the consumer will come into contact with every product on the shelf. However, this can irritate

customers. Customers may feel that they are being forced to follow a certain path, and can be frustrating when trying to make a quick purchase.

3. **Free form layout** is a suitable layout for a store that encourages browsing. This type of layout is more relaxed in its structure, which leaves the customer feeling less rushed.

4.6.6. BOUTIQUE

Boutique is a word derived from old French which means a small shop. Boutique is sometimes referred as a small retail shop that sells women's clothes and jewellery.

Boutique management consultancy firms tend to be small, expensive and highly specialist. A boutique is riskier than an established consultancy. Boutiques (particularly those with only one or two people) may not have established clients, methodologies or administrative processes. Worse, they may not have the resources to train new employees who have limited consulting experience.

4.6.7. BOUTIQUE MANAGEMENT

- Successful boutiques deliver a small number of very-high-quality services.

- Although some boutiques specialize in hand-made items and other unique products, others simply produce T-shirts, stickers, and other fashion accessories and sell them at high prices.

- No consultancy can exist without clients. Most boutiques struggle to build enough market awareness so that potential clients know they exist. The firm must learn to identify potential business opportunities and close deals with strangers

- Boutiques must move beyond armchair consulting. Although experience provides valuable perspective, clients also expect consultants to base their findings and recommendations on rigorous analysis.

- Boutique consultants can't force clients to implement their ideas; they must sell them. This requires collaboration with the client and a willingness to have one's ideas modified.

- Boutique consultants must be proficient with Excel and PowerPoint and willing and able to write their own reports as boutiques rarely employ junior consultants and usually have limited administrative help.

- Some people who choose boutiques find that they miss the status and perks of a large organization. Corporate executives will miss having an executive assistant.

Boutiques may experience large cycles of feast and famine, and most have limited funding to pay the staff during idle periods. Boutique management requires one to be prepared financially.

4.6.8. PRACTICALS

1. Prepare a list required for starting a boutique.

4.6.9. ASSESSMENT ACTIVITIES

1. Assignment – Collections
2. Seminar
3. Field Visit
4. Work diary
5. Class Test
6. Portfolio

4.6.1. TE QUESTIONS

1. Define the term 'Fashion Merchandizing'.
2. Identify & explain the duties and responsibilities of a fashion merchandiser.
3. Identify the career prospects of Fashion Merchandizing.
4. Define the term ' Boutique'
5. List the services offered by a boutique.
6. What are the skills required for managing a boutique? Explain.

List of practicals

1. **Illustration of Types of Design**

   Make a portfolio illustrating application of the following types of designs in garments.
   a. Structural Design
   b. Decorative Design
   c. Natural design
   d. Geometric Design
   e. Stylized Design
   f. Historic Design
   g. Abstract Design

2. **Illustration of Elements of Design – Line**

   Make a portfolio illustrating application of the following types of lines in garments.
   a. Vertical Lines
   b. Horizontal Lines
   c. Diagonal Lines
   d. Zig – zag Lines
   e. Curved Lines

3. **Illustration of Elements of Design – Shape**

   Make a portfolio illustrating different shape (silhouette) of any garment (Gown/ Frock/Skirt/Shirt/Trousers). (2 – 4 illustrations)

4. **Illustration of Elements of Design – Form**

   Make a portfolio illustrating different forms in garments. (2 – 4 illustrations).

5. **Illustration of Elements of Design – Colour**

   Make a portfolio illustrating application of colours in garments. (2 – 4 illustrations)

6. **Illustration of Elements of Design – Texture**

   Make a portfolio illustrating textures using the different methods of creating textured effects. (5 – 10 illustrations)

7. **Illustration of the Design Principle – Formal Balance**

   Make a portfolio illustrating application of the design principle Balance – Formal in garments.

8. **Illustration of the Design Principle – Informal Balance**

    Make a portfolio illustrating application of the design principle Balance – Informal in garments.

9. **Illustration of the Design Principle – Proportion**

    Make a portfolio illustrating application of the design principle Proportion in garments.

10. **Illustration of the Design Principle – Rhythm through Repetition**

    Make a portfolio illustrating application of the design principle Rhythm through Repetition in garments.

11. **Illustration of the Design Principle – Rhythm through Gradation**

    Make a portfolio illustrating application of the design principle Rhythm through Gradation in garments.

12. **Illustration of the Design Principle – Rhythm through Radiation**

    Make a portfolio illustrating application of the design principle Rhythm through Radiation in garments.

13. **Illustration of the Design Principle – Emphasis**

    Make a portfolio illustrating application of the design principle Emphasis in garments.

14. **Illustration of the Design Principle – Harmony**

    Make a portfolio illustrating application of the design principle Harmony in garment

15. **Basic Hues**

    Prepare a chart showing basic hues.

16. **Value scale**

    Prepare values scale of any hue.

17. **Primary Colours**

    Prepare a chart of primary colours.

18. **Secondary Colours**

    Prepare a chart of secondary colours.

19. **Prang Colour Wheel**

    Illustrate prang colour wheel

20. **Illustration of Colour Schemes**

    Illustrate the following colour schemes in garments.

    a. Monochromatic

    b. Analogous

    c. Direct Complementary

    d. Split Complementary

    e. Double Complementary

    f. Triad

    g. Neutral Colours

21. **Colour Rendering**

    Illustrate the colour rendering in garments

22. **Illustration of 10 head fashion croqui**

    Draw a 10 head croqui figure.

23. **Illustration of different poses of female fashion figure**

    Different poses – Front, ¾ th (Oblique) and back (Stick, Block and Flesh)

24. **Illustration of different poses of male fashion figure**

    Different poses – Front, ¾th (Oblique) and back (Stick, Block and Flesh)

25. **Figure detailing – Head**

    Draw head / face with details.

26. **Illustration of Types of Hair Styles**

27. **Illustration of Types of Necklines**

28. **Illustration of Types of Collars**

29. **Illustration of Types of Sleeve**

30. **Illustration of Types of Skirt**

31. **Illustration of Types of Trousers**

32. **Develop a Fashion Portfolio.**

    Develop the different design board according to the design and requirement.

Reference books

1.	Armstrong, H.J Pattern Making for Fashion designers
	Prentice Hall, New Jercy

2.	McKelvey, K & Munslow Illustrating Fashion Blackwell Science, Australia

3.	Grate and Storm Concepts in Clothing McGraw Hill Book Co. New York

4.	Carr, H and Lathan, B The Technology of Clothing Manufacture
	Oxford BSP Professional Book London.

5.	Julian, S Professional Fashion Illustration, B.T. Batsord Ltd.London.

6.	Seaman, A.A & Julian, B.T, Fashion Drawing The Basic Principles, Batsford
	Ltd. London.

7.	Mathews, M, Practical Clothing Construction, (Part I & II)

8.	SITTTER Fashion Design & Garment, Technology – Learning material, State
	Institute of Technical Teachers Training & Research, Kalamassery