



PARTICIPANT HANDBOOK



Apparel

Language:
English

Specialized Sewing Machine Operator

SPECIALIZED SEWING MACHINE OPERATOR



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Chapter 1
Introduction to Stitching and Apparel Sector

Specialized Sewing Machine Operator



Learning Outcome:

After attending the session, the trainees would be able to:

- Understand the stitching and apparel industry in India
- Learn about the different roles of a sewing machine operator

Pre Session Activity

- This activity is in the form of “Flash Card” session.
- The Trainer shows the Trainees pictures/images/icons/clip arts of parts of a sewing machine.
- The Trainees are instructed to identify the components and mention its uses if any.
- The Trainees are expected to raise their hands before answering.

Unit 1.1: Introduction to Stitching and Apparel Section India

The stitching sector is the oldest industry in the Indian economy. Currently, the stitching sector in India is one of the largest contributors to her exports, comprising approximately 13 per cent of the total exports. The Apparel industry provides one of the largest employment opportunities in India.

The present stitching industry in India can be separated into three distinct segments:

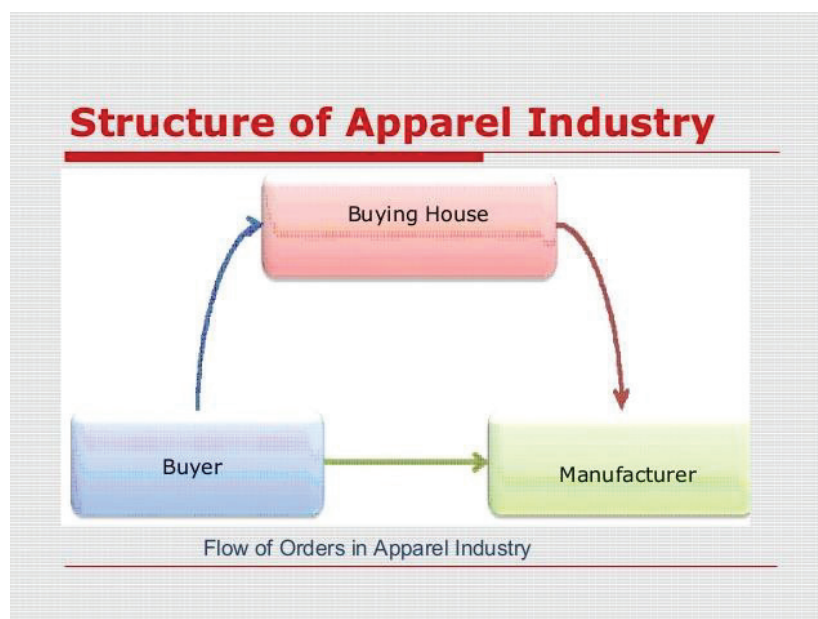
1. The market of traditional and local stitching. The tailors in this segment are skilled groups of persons that take care of the local orders. They have very less exposure to changing fashion trends, technology and product-specific knowledge. Around **80 per cent** of the market comprises local tailors.



2. The retail outlets and online shopping sites. There are number of organised apparel brands that offer stitching services in their fabric retail outlets and multiple online shopping sites. The tailors are specially trained to take appropriate care of the delicate fabrics and also to ensure the right fit and look of the tailored products. This segment comprises around **15 per cent** of the market.

3. The luxury segment. The finest stitching segment consists of fashion designers for the luxury segment. These fashion designers have their own special designs that caters to the requirements of the fashion-conscious selected sections of society. They ensure that the tailored clothing suits the personality, social status and occasion of their client. This segment comprises around **5 per cent** of the market.

The Indian stitching and apparel industry has the capacity to produce a wide variety of products suitable to different market segments, both on domestic and international fronts.



Unit 1.2: Role of a Sewing Machine Operator

Sewing machine operators will perform the following tasks:

- Operating the sewing machine
- Taking measurement of materials for production accuracy
- Fixing accessories such as buttons, zippers and other items on finished products
- Cleaning sewing machines continuously to avoid them getting rusty or bad
- Inspecting equipment, structures, and production materials to identify the reason for errors in production and other defects that may arise
- Promoting personal hygiene by keeping production environment clean
- Understanding and following safety rules, directions, and company procedures
- Placing order for production materials when in shortage
- Distributing finished products to clients as arranged
- Inspecting production equipment

Skills, Knowledge and Abilities of the Sewing Machine Operator are:

Sewing machine operators are expected to possess the following skills, knowledge and abilities, which are vital to their performance on the job:

- Having good knowledge of how sewing machines work
- Having good knowledge about the different fabric
- Having good knowledge about different types of stitches
- Having good knowledge of quality control analysis
- Knowing good time management skills
- Knowing the ability to multitask
- Having the ability to think critically
- Having the ability to make sound decisions
- Working hard
- Working patiently



Specialized Sewing Machine Operator



Exercise:

Fill in the blanks:

1. The present stitching industry of India has been separated into _____ distinct segments. [3,6,8]
2. Around _____ of the market comprises of local tailors. [70%, 80%, 82%]
3. The _____ segment comprises around 5 percent of the market. [Luxury segment, Online shopping segment, Local market segment]



Summary:

- The stitching sector is the oldest industry in the Indian economy. Currently, the stitching sector in India is one of the largest contributors to her exports, comprising approximately 13 per cent of the total exports. The Apparel industry provides one of the largest employment opportunities in India.
- The present stitching industry of India has been separated into three distinct segments.
- Few job role of a sewing machine operator are taking measurements, fixing accessories, cleaning and operating the machine and following rules of the company.
- Skills, knowledge and abilities of a sewing machine operator are – knowledge of operating the machine, quality control methods and management skills, ability to multitask and take a sound decision, should be hard working and have patience.

Post Session Activity:

- This activity is in the form of “Question and Answer” session.
- The Trainer asks the class the question “**What are the key responsibilities of a sewing machine operator**”?
- The Trainees are expected to raise their hands to volunteer and answer the question.
- Each Trainee will answer one point only.
- The answers must be given in a language known by majority of the Trainees in the class.
- The best answer will be appreciated in the class.



Test Yourself:

1. What are the different segments of the stitching industry?
2. Write any 2 job role of a sewing machine operator.
3. Write any 3 skills required for a sewing machine operator.

Chapter 2
Carry Out Different Types of Stitches Using a Specialized Sewing Machine

(AMH/N 2301)

Specialized Sewing Machine Operator



Recall Session:

In the previous chapter, we studied about:

- The stitching sector is the oldest industry in the Indian economy. Currently, the stitching sector in India is one of the largest contributors to her exports, comprising approximately 13 per cent of the total exports.
- The Apparel industry provides one of the largest employment opportunities in India.
- The present stitching industry of India has been separated into three distinct segments.
- Few job role of a sewing machine operator are taking measurements, fixing accessories, cleaning and operating the machine and following rules of the company.
- Skills, knowledge and abilities of a sewing machine operator are – knowledge of operating the machine, quality control methods and management skills, ability to multitask and take a sound decision, should be hard working and have patience.



Learning Outcome:

After attending the session, the trainees would be able to:

- Know about the types of fabrics, apparels and garments
- Know about the apparels that require handmade stitches or machine stitches
- Learn about specification charts
- Learn about the range of techniques suited for different apparels
- Learn about the different apparels and their parts
- Gather knowledge on the sources of updates on apparels
- Understand the common factors that affect stitching
- Get acquainted with different types of needles and broken needle procedure
- Learn about thread thickness, shades and sizes and parts of needle
- Learn about adjusting the top tension
- Know the machine parts
- Troubleshoot when the machine is not functioning correctly

Pre Session Activity:

- This activity will be in the form of a video session.
- The Trainer will show the Trainees a video, on the detail process of Sewing
- The link is: The first step to sewing - <https://youtu.be/wZVWWuMu2tU>
- The idea behind the activity is to impart an overview of the the sewing machine.
- The Trainees are expected to note down the important points.

Unit 2.1: Understanding the Types of Fabrics, Apparels and Garments

The most common types of fabrics are:

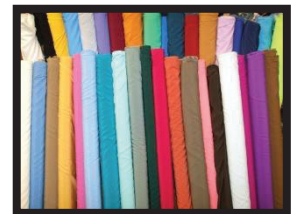
Cotton



Cotton fabric is used to make lightweight attire like *Sari, Salwar kameez etc.* This material is mostly used in summer season as it keeps the wearer cool and can be easily washed.

Crêpe

Crêpe fabric is woven in silk. It is mostly used to make suits and bridal clothing.



Georgette



Georgette is made by combining nylon and polyester. It is liked by most Indian women because of its graceful, soft and delicate appearance.

Silk

Silk is a fabric that is liked by all and can be used to create almost any design. However silk requires more care than any other fabrics.

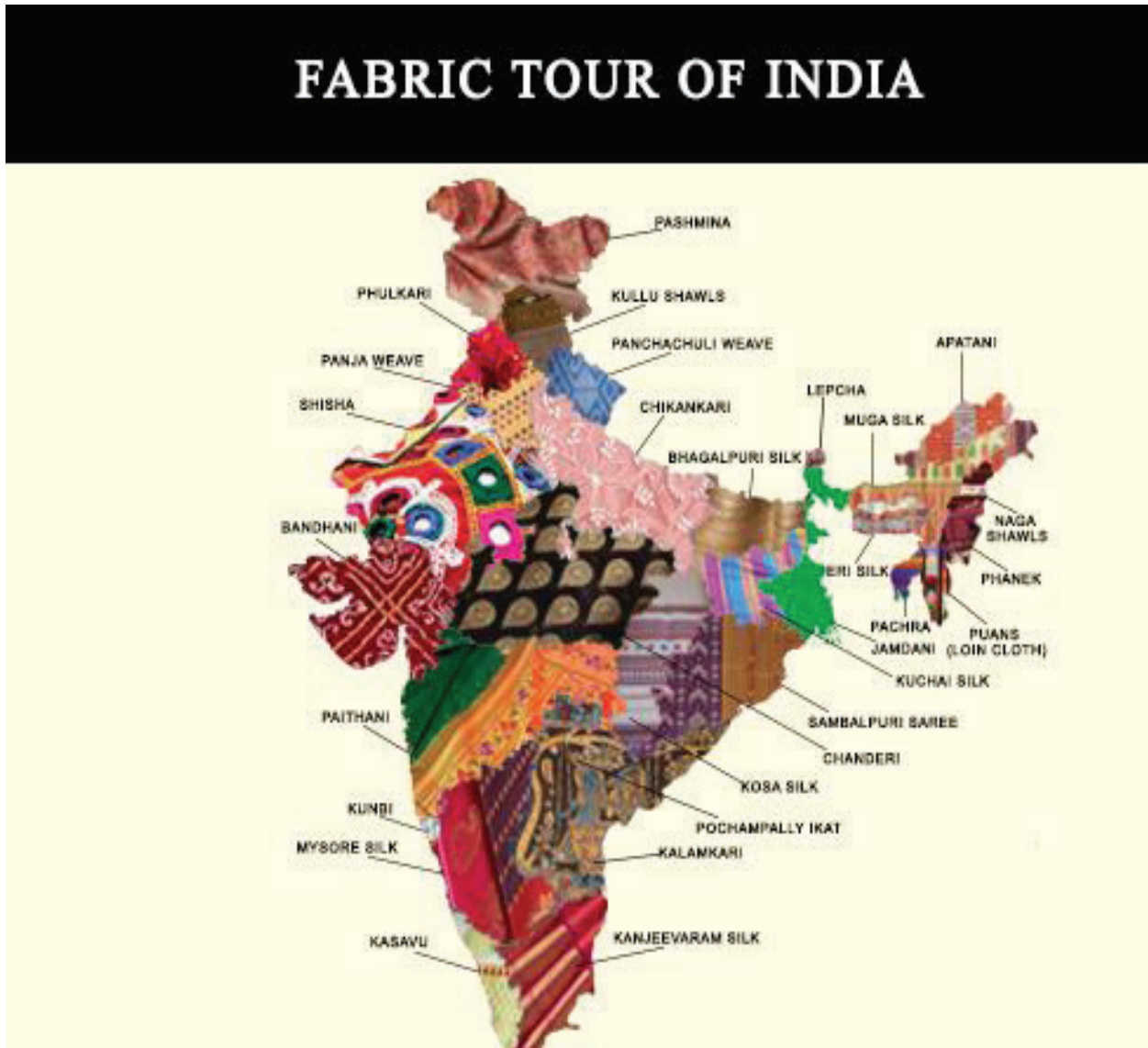


Chiffon



Chiffon is made of a combination of nylon and silk. Sari created from chiffon gives an elegant look.

Types of fabrics available in different parts of India are:



SL. NO.	FABRICS	ORIGINATED FROM
1.	Kalamkari	Andhra Pradesh
2.	Apatani	Arunachal Pradesh
3.	Muga Silk	Assam
4.	Bhagalpuri Silk	Bihar
5.	Kosa Silk	Chhattishagarh
6.	Kunbi	Goa
7.	Bandhani	Gujarat
8.	Panja Durries	Haryana
9.	Kullu Shawla	Himachal Pradesh
10.	Kuchai Silk	Jharkand
11.	Mysore Silk	Karnataka
12.	Kasavu	Kerala
13.	Chanderi	Madhya Pradesh
14.	Paithani	Maharashtra
15.	Phanek	Manipur
16.	Eri Silk	Meghalaya
17.	Puans (Loin Cloth)	Mizoram
18.	Naga Shawls	Nagaland
19.	Sambalpuri Sari	Odisha
20.	Phulkari	Punjab
21.	Shisha	Rajasthan
22.	Lepcha	Ssikkim
23.	Kanjeevaram Silk	Tamil Nadu
24.	Pochampally Ikat	Telangana
25.	Pachra	Tripura
26.	Chickankari	Uttar Pradesh
27.	Panchachuli Weave	Uttarakhand
28.	Tant	West Bengal

Follow the instructions & specifications given in the Techpack to stitch the sample





Importance of Techpack:

1. In the absence of Techpack, the merchandiser is clueless in processing the order
2. Techpack provides the direction for manufacturing a particular style.
3. It streamlines the production department.
4. It guides the quality department.
5. The buyer provides all the specifications in the Techpack.
6. It eliminates many problems, for eg. when the worker face problems, they can follow the Techpack to minimize their problem.
7. Ambiguous information in the Techpack lead to poor garment quality.
8. If Techpack is applied throughout value chain of the apparels effectively, then there will be success to everyone in the value chain.

Contents of the Techpack are:

1. Measurement sheet
2. Garment technical design or flat sketch
3. Fabric specification
4. Colour specification
5. Trim specification
6. Embroidery design scan or sample
7. Embroidery placement
8. Seam and stitch specification and placement
9. Point of measurement
10. Testing methods
11. Graphic specification
12. Graphic placement
13. Colour combination
14. Style number
15. Other technical data related to garment construction

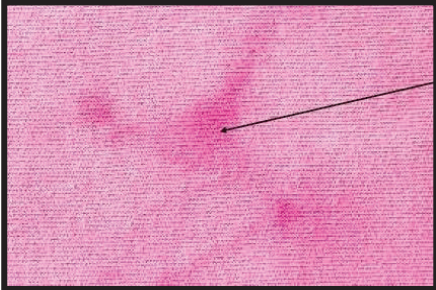
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Garment Specification Sheet			
Style No. # XYZ 01		Date : 20-09-2015	
Category : Womenswear		Size: Medium (D-12)	
Season: Spring-Summer		Designers Name : XYZ	
Description of Garment: Women Casual Summer Top.			
S.No.	Measurements (in Cms.)		
1	Neck Size	36cms	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Front</p>  </div> <div style="text-align: center;"> <p>Back</p>  </div> </div>
2	Across Chest	35cms	
3	Chest	84cms	
4	Waist	78cms	
5	Shoulder	39cms	
6	Across Back	40cms	
7	Scye Depth	23cms	
8	Back Depth	30cms	
9	Length	65cms	
Wash Care Instructions		Machine Wash, Line Dry, Iron Medium, Do not Bleach	
Fabrics / lining	Fabric 1	Fabric 2	Fabric 3
Semi Crepe			
Cotton (Lining)			
Description of Fabric : (Fabric composition, Construction, Width)	Delicate to handle fabric, Width 60"		
Trims and Accessories	Roll On Crepe Straps Sequin Detailing in front Microdot Fusing		
Remarks	All fabric patterns need to be overlocked before stitching; Sequin Detailing has to be handled carefully, Lining should be overlocked.		

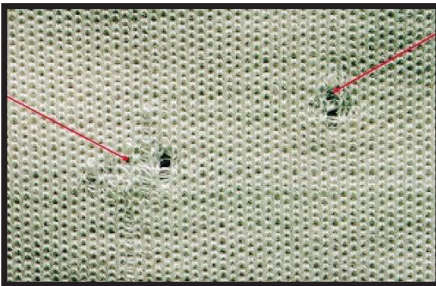
Faults in fabrics

Common faults in fabrics are:

1. Dye marks



2. Holes in the fabrics by defective machine element



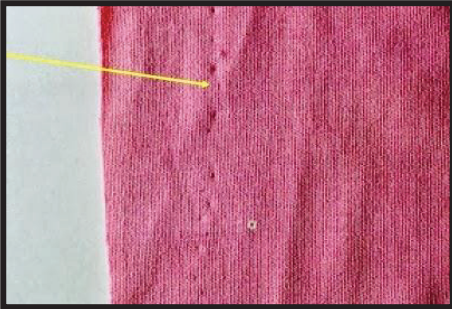
3. Ladder – Wales collapse in straight line means when the stitch suddenly breaks the straight line



4. Missing plush loops



5. Pin marks



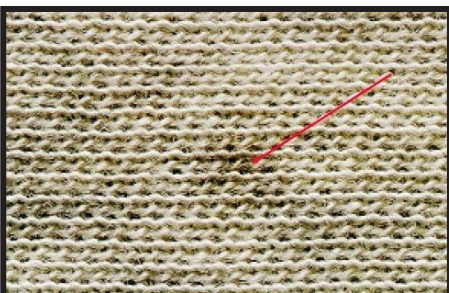
6. Slub or thickness in yarn



7. Spirality, over twisted yarn



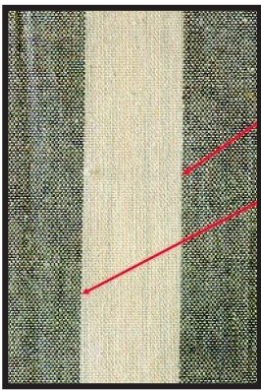
8. Stain, oil or dirt



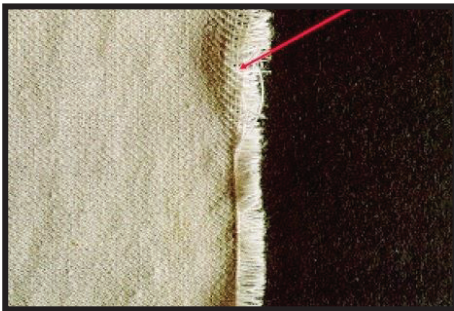
9. Bar or variation in weft yarn



10. Colour bleeding



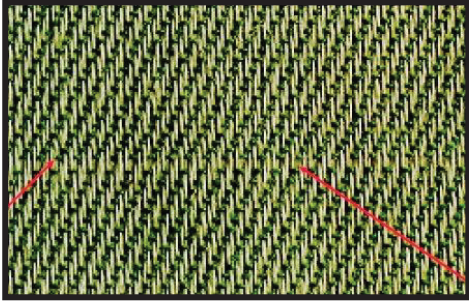
11. Poor construction selvedge



12. Slack wrap or faulty pattern



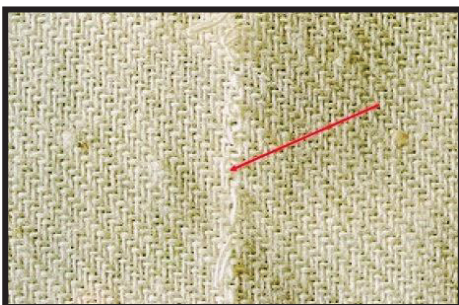
13. Incorrect weft insertion



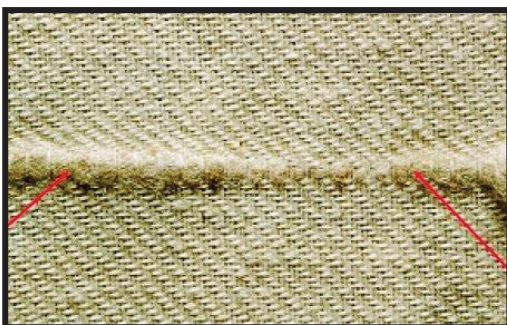
14. Damaged reed



15. Insufficient wrap tension



16. Weft yarn slips from prin



17. Lack of control for wrap tension



Unit 2.2: Use of Specification Chart

Things to remember before measuring:

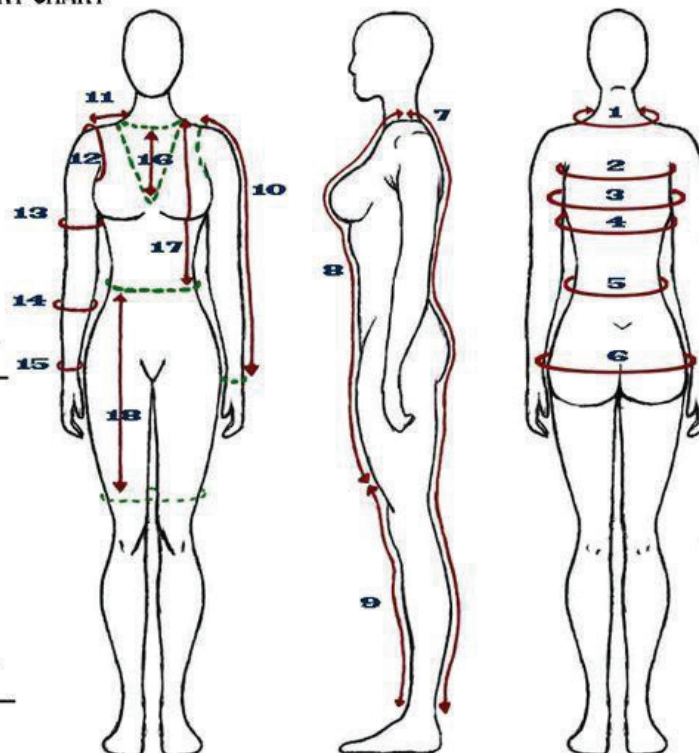
1. Use a non-stretchable tape
2. Ensure that the tape measure is level around your body and parallel to the floor
3. Keep tape close to your skin without depressing it

Measurements:

- **Bust:** Measuring all the way around the bust and back on the line of the nipples.
- **Chest:** Measuring directly under the breasts, as high as possible.
- **Waist:** Measuring at its narrowest point, width, usually just above the navel.
- **Hips:** Measuring around the widest part of the hipbones.
- **Midway:** Measuring midway between the widest part of the hips and the waist.
- **Thighs:** Measuring around fullest part of upper leg while standing
- **Knees:** Measuring immediately above the knee.
- **Calves:** Measuring around fullest part.
- **Upper arm:** Measuring above the elbows – around fullest part.
- **Forearms:** Measuring below the elbows – around fullest part

DRESS / SHIRT MEASUREMENT CHART

1. NECK _____
2. OVER BUST _____
3. BUST _____
4. UNDER BUST _____
5. WAIST _____
6. HIPS _____
7. NECK TO HEEL _____
8. NECK TO ABOVE KNEE _____
9. ABOVE KNEE TO ANKLE _____
10. ARM LENGTH _____
11. SHOULDER SEAM _____
12. ARM HOLE _____
13. BICEP _____
14. FORE ARM _____
15. WRIST _____
16. V NECK CUT _____
17. SHOULDER TO WAIST _____
18. WAIST TO ABOVE KNEE _____



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Women size chart:

SIZE: MEDIUM

S.NO.	SPECIFICATIONS	MEASUREMENTS (in Inches)
1	Chest	36
2	Waist	28
3	Shoulder	15
4	Half Sleeve Length	7
5	Half Sleeve Girth	12 1/2
6	Full Sleeve Length	21
7	Full Sleeve Girth	10
8	Salwar Length	10
9	Salwar Bottom Opening	12 1/2
10	Hip	37
11	Trouser Length	42
12	Round Neck	15
13	Waist level from shoulder	15
14	Crotch	10
15	Knee	21

Men size chart:

SIZE: MEDIUM

S.NO.	SPECIFICATIONS	MEASUREMENTS (in Inches)
1	Chest	38
2	Waist	32
3	Shoulder	19
4	Half Sleeve Length	9
5	Full Sleeve Length	24
6	Waist level from shoulder	18
7	Round Neck	16
8	Half Sleeve opening	7 1/2
9	Full Sleeve opening	6
10	Hips	36