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**FINAL EXAM**

Intro to textile

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**Answer no 1**

**(|)**

In cotton spinning, the first action is managed and controlled by the sequence of machinery called the blow room, whose main objective is to separate good fibres from impurities like dust, leaves, trash, seed coats and lint. … For spinning good quality yarn, fibres should be free from these impurities.

**(||)**

The reasons in which the 100% cleaning is not done because of the lower extraction of wastes than required for that mixing considering the trash content is one of the main reasons for low cleaning efficiency. Increase the wastes if the lint in the wastes is normal or nil. If the beater speeds are lesser than required, we get lower cleaning. Reduce the fan speed following the beaters by 100 to 200 RPM.

**(|||)**

CARDING IS CALLED THE HEART OF SPINNING:

In carding, fibers are opened to more or less single fibers. Dust, dirt, neps are removed here. Fiber blending and parallelization are also done here. ... Since all the major functions are performed in carding, it is called the heart of spinning.

**Answer no 2**

**Spinning.**

Spinnig is the process by which fibers are converted into yarn.

**Process flow chart of spinning**


**1,blowroom**

Blowroom is the supplied where the delivered compacted bales are turned into an even lap of a opening . And these fibers are cleaned with the help of blending and mixing .blowroom is the first step of yarn production in the spinning mills.this bsles are taken to the blowroom and prepared for the process..

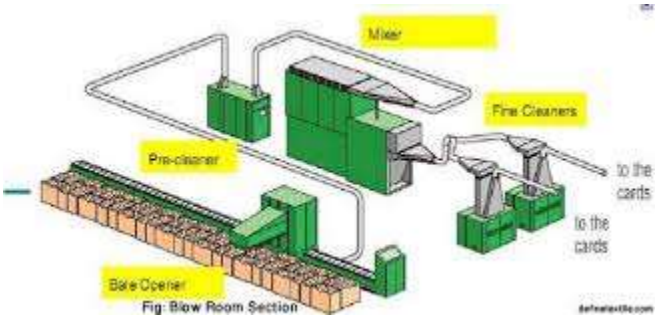


Fig: Blow Room Section

**Function of blowroom**

**: Opening the cotton fiber bales.**

**Cleaning the fibers dust dirt broken leaf**

**Blending ..by blending different types of cotton produce enhance quality of yarn..**

**Forming lap from packed down cotton bales.**

**2,carding**

The carding is the second process of spinning which converts (lap) into uniform strand of fibres called “sliver”carding continues the cleaning process removing too shorts for yarns and seprating the fibers that they lay parallel to.each other .

**Function of carding**

1,to give some degree of blending

2,to remove the small trash particle

3,to.eliminate the remaining impurities

4,fiber orientation

**3,combing**

The process of combing is accompanied by gilling, a process of fiber.combing separates out short fibres and using brush rollers is called combing process

**Objective of combing**

To remove the short fibres present in the sliver.

• To straighten the fibres.

To eliminate the dirt and dust present in the cotton.

• To maximize the cleanliness of the cotton.

**4,Drawing process**

Drawing, also called Drafting, in yarn manufacture, process of attenuating the loose assemblage of fibres called sliver (q.v.) by passing it through a series of rollers, thus straightening the individual fibres and making them more parallel.

**Function of drswframe machine**

Draw Frame is a machine for combining and drawing slivers of a textile fiber

2,to straighten the crimp and hooked fibers

3,to produced a more uniform silver

4 to reduce the weight /unit of the card silver

**5,: Roving frame.: Simplex is an intermediate process in which fibers are converted into low twist is called roving .**

**Function of roving process**

Its purpose is **to prepare input package for next process**. This package is to prepare on a small compact package called bobbins

**Answer no 3,**

**Knitting .**

Knitting is a method by which yarn is manipulated to create a textile or fabric. It is used in many types of garments. Knitting may be done by hand or by machine.

**Types of knitting**

**1,weft knitting**

**2,wrap knitting**

**1,weft knitting**

Weft knitting  is a method of forming a fabric in which the loops are made in horizontal way from a single yarn and intermeshing of loops take place in a circular or flat form on.across wise basis

**Types of weft knitting**

**1,plain knit**

Plain knitting is the most basic of all knitting constructions. It is a weft knit, which is the most common type of knit

: Plain knit  only pattern that a piece of plain knitting has in it is interlocking ‘v’ shapes on the front and crescent shapes on the back.

Plain knitting can be done either by hand or using a knitting machine. Until the invention of the knitting machine, all knitting was done by hand...

Plain knitting is still a very popular technique with many knitted fabrics that we wear today being made from plain knitting or a combination of plain and purl stitch.

**2,purl knit**

Purl Knit– It is made by a purling stitch in one wale of the fabric and knitting yarn as substitute knit. The best aspect of this fabric is that it does not lie flat or curl.

**3,interlock fabric**

Interlock Knit Fabric is stretchy fabric knitted with interlocking stitches by alternating


sets of needles on a circular knitting machine.

**4,Rib knit**

A knitted fabric with alternating raised and lowered rows. More elastic and durable than plain knits, they tend to fit the body and are used frequently in T-shirts, as well as for the trims of socks, sleeves, waists and necklines

**2,wrap knit**

Wrap knitting is methof method of forming a method in which the loops are vertical way along the the length of the fabric from each wrap yarn.

**Types of wrap knits**

**1,single jarsey**

Flat or Jersey Knit Fabric

flat-jersey-knitFlat or Jersey Knit fabrics have visible flat vertical lines on the front and dominant horizontal ribs on the back of the fabric. The flat or jersey knit stitch is used. The flat or jersey stitch can be varied by using different yarns or double-looped stitches of different

lengths to make terry, velour, and plush fabrics. This stitch is also used in making nylon hosiery, men’s underwear, and t-shirts.

**2,tricot knit**

Tricot fabric has a unique zigzag weave that is textured on one side and smooth on the other. This allows the fabric to be soft and also very sturdy for activewear.

**2,rashcel knit**

**Raschel Knit:**

**The Raschel knit ranks in importance of production with tricot but it makes varieties of products ranging from sports nets, spacer fabrics, mesh fabrics etc. Raschel knitting is done with heavy yarns & usually has a complex lace-like pattern**

## Examples

### 1,example of weft knitting

Example of the versatility of weft knitting technology for the production of 3D complex shaped for compodsite reinforceiment

### 2,example of wrap knitting

Shawls is an.wrap knitting pattern


FREE KNITTING PATTERN &
TUTORIAL
MAMA IN A STITCH

**Answer no 4**

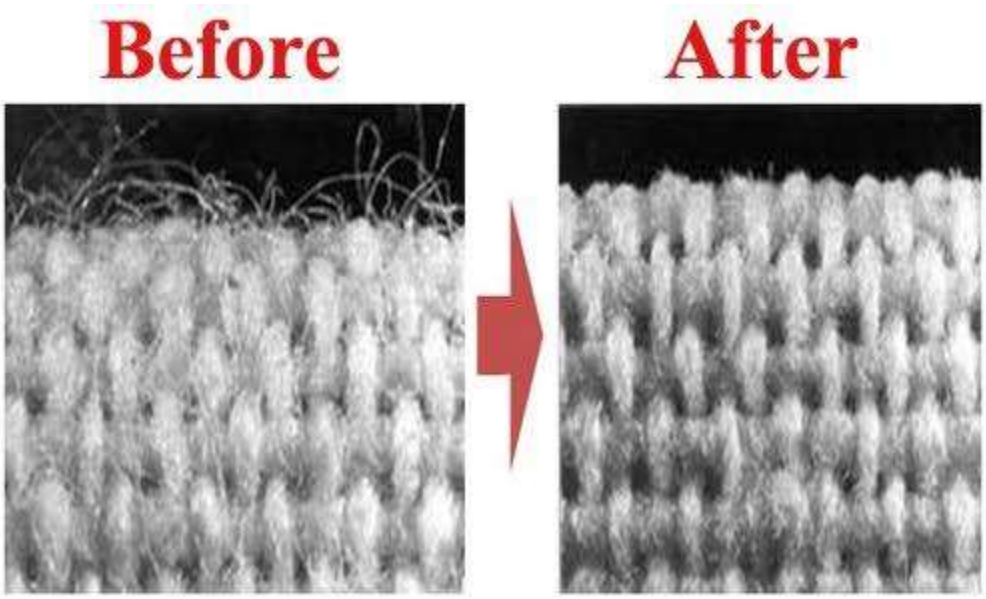
**Singeing.**

Singeing is a pre treatment in which loose fibers are brunt which are not firmly bound into the yarn or fabric structure .

**Yarn singeing.**

Yarn singeing is also done at yarn stage.for the yarn singeing it is an operation carried out in order to eliminate yarn hariness .

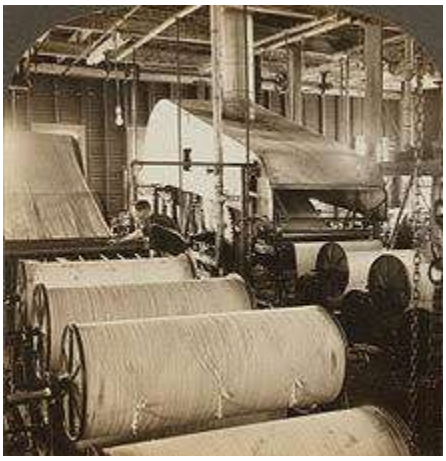
**Fabric yarn**



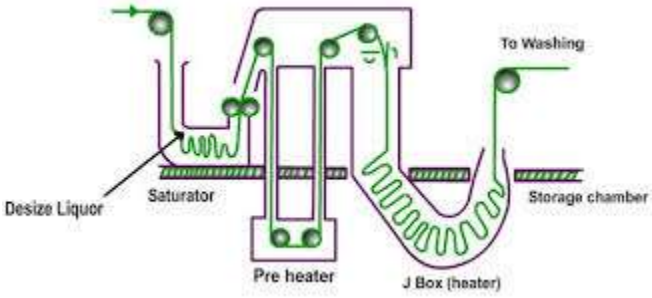

**1,sezing**

Sizing or size is a substance that is applied to, or incorporated into, other materials—especially papers and textiles—to act as a protective filler or glaze. Sizing is used in

papermaking and textile manufacturing to change the absorption and wear characteristics of those materials.



**2,desizing.**




Desizing is the process of removing the size material from warp yarns after a textile fabric is woven.

**How desizing is performed ?**

1,the desizing agent is, involves impregnation of the fabric with the desizing agent,

2,mixed size containing strach and synthetic polymers also require chemical treatment .

**Scouring**

Scouring is a pretreatment process which is used to remove unwanted impurities from the fabric like waxes futs ,husk and seeds hulls etc.

**How scouring is performed ?**

Traditionally a dilute solution of sodium hydroxide is used for scouring .

The fabric is repeatedly rinsed with water to remove alkali..

Finally it is rainsed again in water.

**Bleaching process**

Bleaching. Bleaching, a process of whitening fabric by removal of natural colour, such as the tan of linen, is usually carried out by means of chemicals selected according to the chemical composition of the fibre.

**Bleaching action.**

**The bleaches are oxidizing agent which changes the color producing matter into colorless product however it reminds in the fiber**

**Mercerization…**

Mercerization is a preparation process which is applicable to cotton only..

Some of the fibers which are immuture also exist in collasped form ..

It changes the many of the chemical and physical properties of the cotton stren luster etc.

**Effect of mercerization..**

The effect of different mercerization techniques on tactile comfort properties of woven cotton fabric has been studied. Desized, scoured and bleached cotton fabrics are subjected to four different mercerization treatments at two levels of temperature (20□C and 65□C) under two different conditions (tension and slack).

Incresing softness

Improved luster

Increse affinaty for dyes

Heigher water absorption

Increse extensiblity…