

L23- Yarn and its Construction

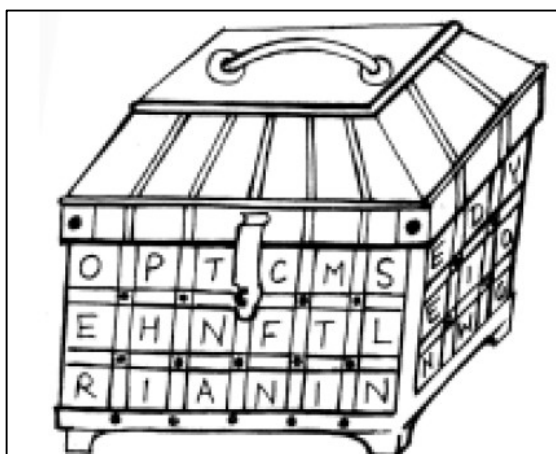
Keywords

Yarn	Spindle (takli)	Terelene, terrywool, terrysilk	Khadi
Knitting	Spinning wheel (charkha)	Crinkled effect	Texturizing
Spun yarn	Spinnerette	Crepe	
Filament yarn	Terrycot	Poplin and cambric	
Spinning	Cotswool	2 by 2 rubia fabric	

In-text Questions

In-text Questions 23.1

1. Fill in the blanks using the letters in the treasure chest. Each letter can be used more than once.



- i. Chemical spinning involves making a spinning solution, passing the solution through a spinnerette and solidifying into fibre form.

- ii. Spinning can be done using a spindle, Spinning wheel or spinning machine.
- iii. Spun yarns are made from Staple fibres and filament yarns from filament fibres.
- iv. Two types of blends are cotswool and terycot.

In-text Questions 23.2

1. Differentiate between the following:

- i. Single yarn and ply yarn.
- ii. Cord yarn and core yarn.
- iii. Complex yarn and Textured yarn.
- iv. Thread and yarn.

Answer:

- i. Single yarn and Ply yarn.

Single Yarn	Ply Yarn
Single yarn is an assemblage of fibres twisted together.	Ply yarn is made of two or more single yarns twisted together.

- ii. Cord yarn and Core yarn

Cord Yarn	Core Yarn
Cord yarn is made of two or more ply yarns twisted together.	A yarn made by twisting fibers around a filament or a previously spun yarn, thus concealing the core.

- iii. Complex Yarn and Textured yarn

Complex Yarn	Textured Yarn
Complex yarns are the uneven yarns which may be thick and thin or have curls, loops, twists and even differently coloured areas along their length.	Texturizing is a treatment usually given to a manmade filament, after which it becomes curly or acquires some forms of loops, coils or crimp.

iv. Thread and Yarn.

Thread	Yarn
A thread is usually a ply yarn, it is finer, more even and stronger.	Yarn is an assemblage of fibres twisted together.

2. Justify the following statements giving examples where ever applicable.

- i. A high amount of twist brings in the crinkle effect in the yarn.
- ii. Complex yarns give fancy effects in fabrics.
- iii. Complex yarns are uneven in their diameter.
- iv. Thread is not the same as yarn.

Answer:

- i. A high amount of twist brings in the crinkle effect in the yarn.

Answer: High twist yarns are called *crepe* yarns and are mainly used to make fabrics for dupattas.

- ii. Complex yarns give fancy effects in fabrics.

Answer: Complex yarns are the uneven yarns which may be thick and thin or have curls, loops, twists and even differently coloured areas along their length. Due to this fancy look of the yarns they are used to add interesting effects in fabrics. Example: Khadi fabric.

iii. Complex yarns are uneven in their diameter.

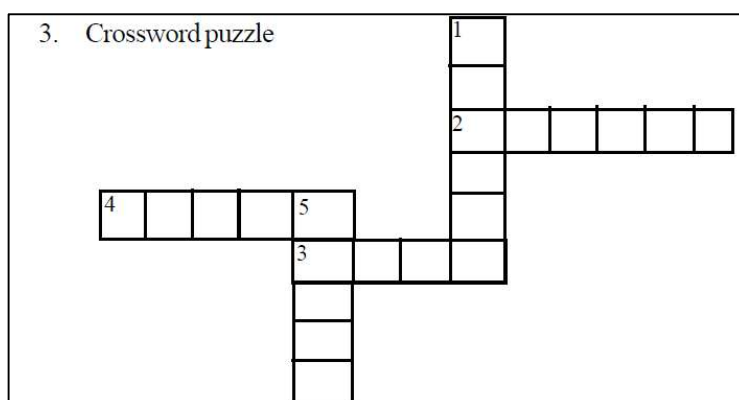
Answer: Complex yarns are the uneven yarns which may be thick and thin or have curls, loops, twists and even differently coloured areas along their length. Due to this fancy look of the yarns they are used to add interesting effects in fabrics. Example: Khadi fabric.

iv. Thread is not the same as yarn.

Answer:

Thread	Yarn
A thread is usually a ply yarn, it is finer, more even and stronger.	Yarn is an assemblage of fibres twisted together.

3. Crossword puzzle



Clues:

Down

1. Fibre good for undergarments - Cotton
5. Strongest manmade fibre - Nylon

Across

2. Strong, finely twisted yarn - Thread
3. Group of fibres - Yarn
4. Manmade cellulosic fibre - Rayon

Terminal Questions

1. How will you define a yarn?

Answer: Yarn is an assemblage of fibres twisted together.

A yarn can either be a spun yarn (from staple fibres) or a filament yarn (from filament fibres).

On the basis of their structure, yarns are broadly classified into three types:

i) Simple yarns ii) Complex/Novelty yarns iii) Textured yarns

2. Explain the process of making yarns from staple fibres.

Answer: The process of making yarns from staple fibres:

- a. A bundle of staple fibres is taken, cleaned and straightened.
- b. After this, they are pulled out and drawn and a twist is given to hold them together. The resultant yarn is a spun yarn.
- c. This process of pulling the fibres and twisting them together is called spinning. You can spin using a takli (spindle), charkha (spinning wheel) or a spinning machine.

3. Why are fabrics made from textured yarn more comfortable to wear?

Answer: Fabrics made from simple filament yarns are uncomfortable to wear.

- When such filament yarns are textured they look denser, become bulky, and more stretchable.
- Due to their changed texture, spaces are created between yarn.
- This makes the fabric breath better and become more absorbent and therefore comfortable to wear.

4. Which additional properties make a yarn into a thread?

Answer: A yarn is processed further to make a thread.

A thread is usually a ply yarn, it is finer, more even and stronger.

5. What kind of properties will you look for when you purchase “terewool fabric”?

Answer: Terylene has the property of easy maintenance and wool provides warmth. Thus, while buying terrywool fabric, the two properties considered are- easy maintenance and warmth during winter season

Previous Year Questions

1. State two reasons as to why terycot is considered better than cotton fabrics? [1]

Answer: Cotton fibre is mixed with terelene to get terycot. It is widely used in the textile industry to make clothes that are very comfortable to wear. It is:

- Easy to wash.
- Remains crisp after use.
- Hard to stain.
- Colors do not fade easily.

2. Explain the chemical spinning process for making yarn from filament fibres.
2

Answer: The chemical spinning process for making yarn from filament fibres:

- a. A spinning solution of the raw materials is made.
- b. This solution is passed through the holes of a spinnerette (looks like a bathroom shower).

- c. The solution solidifies into thread like form called the filament fibre.
- d. These filament fibres are twisted together to form a strong and fine yarn.

Differentiate between the following :

4

- (i) Simple yarn and textured yarn.
 - (ii) Thread and single complex yarn.
- 3.

Answer:

- i. Simple yarn and Textured yarn

Simple Yarn	Textured Yarn
A yarn which is smooth and uniform and evenly twisted is called a simple yarn.	Texturizing is a treatment usually given to a manmade filament, after which it becomes curly or acquires some forms of loops, coils or crimp.

- ii. Thread and single complex yarn

Thread	Single Complex Yarn
A thread is usually a ply yarn, it is finer, more even and stronger.	A single complex yarn is usually unevenly twisted to make it thick and thin in places. Example: 'Khadi' fabric.

4. Differentiate between simple and complex yarns. 6

Answer:

Simple Yarn	Complex Yarn
A yarn which is smooth and uniform and evenly twisted is called a simple	Complex yarns are the uneven yarns which may be thick and thin or have

Simple Yarn	Complex Yarn
yarn.	curls, loops, twists and even differently coloured areas along their length.
It is commonly used for making fabric like poplin and cambric	This is the type of yarn which is found in the 'Khadi' fabric.
<p>Simple yarns are classified into three types:</p> <ul style="list-style-type: none"> i. Simple Single Yarn ii. Simple Ply yarn (2-ply, 3-ply, 4-ply) iii. Simple Cord Yarn 	<p>Complex yarns are classified into:</p> <ul style="list-style-type: none"> i. Complex Single Yarn ii. Complex Ply Yarn iii. Complex Core Yarn