



# UNIT - 3

## Practical Assignment

(Practical has been divided into two parts: Part A deals with the practical fabric sample weaving on the table top loom while Part B deals with graphical representation of different weaves)

### Part A

**Aim:** To use inch graph paper (The square grid paper used to draw design, draft and peg plan) to practice the following weaves

Material required: Inch graph paper, Pen, Sketch pens, HB Pencil, Eraser, pencil sharpener, scale, and note pad.

#### Assignment No. 6

Use graph paper to draw plain weave with drafting and peg plan.

#### Assignment No. 7

1. Draw 5 regular or irregular Mat weaves with drafting and peg plan
2. Draw 5 regular or irregular Warp Ribs with drafting and peg plan
3. Draw 5 regular or irregular Weft Ribs with drafting and peg plan

#### Assignment No. 8

1. Draw 5 Balanced Twill weave with drafting and peg plan
2. Draw 5 Un balanced Twill weave with drafting and peg plan
3. Draw 5 "S" Twill with drafting and peg plan
4. Draw 5 "Z" Twill with drafting and peg plan

#### Assignment No. 9

1. Draw 5 regular and irregular sateen weave with drafting and peg plan
2. Draw 5 regular and irregular satin weave with drafting and peg plan

**Outcome:** The student will be able to draw design, draft peg plan for all the designs that they have studied.

## Part B

### Fabric Weaving:

Fabric weaving refers to any material made through weaving. Weaving as such carried using an instrument known as the Loom. The loom may be operated by hand and is called hand loom. When the loom is operated using power it is called powerloom. The fabric thus produced using these looms may be used in production of any end use product such as garments. When a material is constructed using any textile fiber into 2 dimensional or 3 dimensional structures which may be drape-able, spreadable and pliable, is called a fabric.

### Assignment No. 10: Sample weaving - Plain Weave

Name of the weave: Plain weave

Equipment: Table top loom

No. of shafts requires: 4

No. of shuttles: 1-2

Materials for warp: As mentioned on Page 2

Materials for weft: Weft could be cotton in any one of the count, 2/10s or 2/17s or 2/20s

Aim of the Practical assignment:

To construct a plain weave on a table top loom.

### Principles:

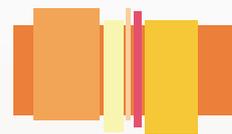
In principle in order to construct a plain weave, each warp yarn passes alternatively over one and then under one weft yarn. They require only two heald shafts or harnesses because the weave repeats every two ends and two picks. When one heald shaft is raised the other is lowered, and then the sequence is reversed for the next pick

### Requirements:

In order to weave it requires a loom with a warp on it, with variety weft yarn, a shuttle with technical sheet having information about the weaves and lifting plan.

### Procedure/methods:

Based on the information provided in technical information the weaving is carried out



Observations:

Observe the passage of warp and the way warp yarns are lifted and the manner in which the weft yarn is inserted to achieve a plain weave.

**Viva Questions:**

What is the two most primary element used in a weaving?

**Assignment No. 11: Sample weaving - Mat Weave**

**Name of the weave:** Mat weaves

**Equipment:** Table top loom

No. of shafts requires: 4

No. of shuttles: 1-2

**Materials for warp:** As mentioned on Page 2

**Materials for weft:** Weft could be cotton in any one of the count, 2/10s or 2/17s or 2/20s

**Aim of the Practical assignment:**

To construct derivatives of plain weave that is Mat weave.

**Principles:**

In principle in order to construct a Mat weave, two warp yarn passes alternatively over two and then under two weft yarn.

**Requirements:**

In order to weave it requires a loom with a warp on it, with variety weft yarn, a shuttle with technical sheet having information about the weaves and lifting plan.

**Procedure/methods:**

Based on the information provided in technical information the weaving is carried out

**Observations:**

Observe the passage of warp and the way warp yarns are lifted and the manner in which the weft yarn is inserted to achieve a Mat weave.

**Viva Questions:**

How the Mat weave is similar to that of plain weave?

## Assignment No. 12: Sample weaving - Rib Weave

**Name of the weave:** Warp Rib weaves or Weft Rib weaves

**Equipment:** Table top loom

No. of shafts requires: 4

No. of shuttles: 1-2

**Materials for warp:** As mentioned on Page 2

**Materials for weft:** Weft could be cotton in any one of the count, 2/10s or 2/17s or 2/20s

### **Aim of the Practical assignment:**

To construct a warp/ weft Rib weave on a table top loom.

### **Principles:**

In principle in order to construct a Rib weave, one or each set of warp yarn passes alternatively over one or set of weft yarn. They require only two heald shafts or harnesses because the weave repeats every two or more ends and two or more picks. When one heald shaft is raised the other is lowered, and then the sequence is reversed for the next pick.

### **Requirements:**

In order to weave it requires a loom with a warp on it, with variety weft yarn, a shuttle with technical sheet having information about the weaves and lifting plan.

### **Procedure/methods:**

Based on the information provided in technical information the weaving is carried out.

### **Observations:**

Observe the passage of warp and the way warp yarns are lifted and the manner in which the weft yarn is inserted to achieve a Rib weave.

### **Viva Questions:**

What is the two most primary element used in a weaving?

## Assignment No. 13: Sample weaving - Twill Weave

**Name of the weave:** Twill weaves

**Equipment:** Table top loom

No. of shafts requires: 4

No. of shuttles: 1-2



**Materials for warp:** As mentioned on Page 2

Materials for weft: Weft could be cotton in any one of the count, 2/10s or 2/17s or 2/20s

Aim of the Practical assignment:

To construct Twill weave.

**Principles:**

2 up and 2 down twill (2/2) running from right to left repeating on four ends and four picks. In this weave equal size of lines are formed by alternately raising and lowering down two warp threads for every pick and stepping one warp thread in consecutive rotation as successive picks are inserted

**Requirements:**

In order to weave it requires a loom with a warp on it, with variety weft yarn, a shuttle with technical sheet having information about the weaves and lifting plan.

**Procedure/methods:**

Based on the information provided in technical information the weaving is carried out

**Observations:**

Observe the passage of warp and the way warp yarns are lifted and the manner in which the weft yarn is inserted to achieve a Twill weave.

**Viva Questions:**

How to identify a twill weave?

**Assignment No. 14: Sample weaving - Sateen Weave**

**Name of the weave:** Sateen weaves

**Equipment:** Table top loom

No. of shafts requires: 5 (the student will be required to redraft and re-dent for this swatch)

No. of shuttles: 1-2

**Materials for warp:** As mentioned on Page 2

**Materials for weft:** Weft could be cotton in any one of the count, 2/10s or 2/17s or 2/20s

Aim of the Practical assignment:

To construct Sateen weave.

**Principles:**

5 End Sateen can be woven using the move of 2 and move of 3.

**Requirements:**

In order to weave it requires a loom with a warp on it, with variety weft yarn, a shuttle with technical sheet having information about the weaves and lifting plan.

**Procedure/methods:**

Based on the information provided in technical information the weaving is carried out

**Observations:**

Observe the passage of warp and the way warp yarns are lifted and the manner in which the weft yarn is inserted to achieve a Sateen weave.

**Viva Questions:**

How to identify a sateen weave?

**Assignment No. 15**

Collect any 10 varieties of fabric swatches (as taught in the Chapter-12) from the nearest market or tailor shop, cut them into 5"x 5" swatch pieces and stick them in your books with its commercial name and basic qualities of fabrics.

The various fabrics are available in the market. The fabric could be a plain weave or mat or twill, but they are usually not sold in the market with these names.

The fabrics are sold in the market with commercial name. For example the fabric could be plain woven fabric but it is called as poplin, cambric, lizzy bizzzy, etc. These names have been derived maybe because of its composition, the mill that first made this variety of fabric, its construction.

**Objective:** To study the different variety of fabric as available by the commercial name.

**Method:**

1. The student should go to a cloth shop, tailor or mall in the neighborhood and collect the following swatches.
2. Collect at least 10 swatches by the commercial name as taught in the chapter-11 of Unit-IV
3. Cut these swatches into 5"x 5" pieces and stick them in the scrap books
4. Classify these swatches
5. Write there
  - a. EpIXPPI
  - b. Weave
  - c. Weight (in Grams per square meter)
  - d. End Use

**Outcome:** the students will understand the different commercially available fabrics and will be able to identify them.





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