

## 2.13 40222 FABRIC STRUCTURE AND ANALYSIS

### UNIT-1 INTRODUCTION

- 1.1 Introduction to fabric structure. Explanation of woven structure and other fabric structures. E.g. Knitted, Nonwoven, Bonded etc.
- 1.2 Definition of Warp and Weft, Ends and Picks. Determination of warp and weft in a given fabric Design, Repeat of a design, Draft, Lifting or Peg plan and Denting order.
- 1.3 Types of drafts used in the manufacture of the fabrics.
- 1.4 Construction of plain weaves on point or graph paper. Relation of draft, design and peg plan.
- 1.5 Construction of plain weave and its derivate in the form of simple Matt or Hopsack and Ribbed Structures.
- 1.6 Various Hopsack or Matt weave designs with warp face, weft face and reversible effects.
- 1.7 Ornamentation of plain fabrics by different methods.

### UNIT-2 TWILL WEAVES

- 2.1 Construction of Twill weaves and their classification under the following heads.
- 2.2 Continuous regular twills.
- 2.3 Pointed twills.
- 2.4 Combined twills.
- 2.5 Rearranged twills.
- 2.6 Broken twills.
- 2.7 Fancy twills.

### UNIT-3 ANALYSIS OF FABRICS

- 3.1 Analysis of a fabric and its objects. Confirmation of warp and weft and determination of weaving particulars from the given sample of a fabric.
- 3.2 Procedure for transferring the interlacement of ENDS and PICKS on graph paper for obtaining the design of the given sample of the fabric.

### UNIT-4 SATIN WEAVE

- Characteristics and uses of satin and sateen weaves.  
Construction of regular and irregular satin and sateen.

### UNIT-5 DESIGN

- 5.1 Construction of the following design on point paper along with their draft, peg plan, denting order and weaving particulars. i. Diamond and Diaper weaves on pointed draft. .
- 5.2 CREPE weaves by different methods and their characteristics.
- 5.3 Simple Honeycomb, Brighton Honeycomb, Huck-a back, weaves.
- 5.4 Mock leno weaves.

### UNIT-6 FABRICS

- 6.1 Calculation of fabric weight (GSM).

## UNIT-7 MISCELLANEOUS WEAVES DESIGN OF FOLLOWING WEAVES ONLY

- 7.1 Sponge weaves
- 7.2 Devon huck
- 7.3 Barley Corn
- 7.4 Stitched hop-sack
- 7.5 Twilled hop-sack

### Reference Books:

1. Fabric Structure and Design by N Gokarneshan
2. The Primary Structures of Fabrics: An Illustrated Classification by Irene Emery
3. Woven Fabric Structure Design and Product Planning (Woodhead Publishing India in Textiles) by J Hayavadana

