# III

## Statement of the Problem

To decorate clothing and other fabrics of environment by printing, is one of the earliest means of decoration and is equally important today and is practised by many a people. Out of the various techniques used for small scale printing block printing is simple and the skill is acquired early. Materials for blocks, other than wood and which are easy to work with are linoleum, U-foam, dotted rubber, strings, fabrics pieces etc. are easily available and can give interesting effects on printing. Granulated texture can be obtained by printing with an unflocked linoleum block (20).

Thus it is important to develop this block printing by using simple materials for printing and creating different effects. Such a development can be useful for printing on a small scale. One of the objectives of this study was to try for the possibility of getting tone/shaded design effect by block printing with varying printing surfaces, having varying absorbancy and compressibility.

In the literature, linoleum was mentioned as one of the printing surfaces which is normally used by flocking. The possibility of variation in this surface was by using flocked and unflocked together which can give toned/desired textured effect; other surfaces that were not so far attempted were U-foam and dotted rubber. In an earlier study (10) in the

clothing and textiles department adaptibility of these surfaces were explored and the results were quite encouraging. The present author, who was connected with this earlier work, therefore undertook to study further these printed design effects.

The initial difficulties faced in using these different surfaces together on one block for getting tone effects were, in getting uniform designs, durability of printing surfaces, different thickness of the printing surfaces. Thus it was necessary to use them in seperate printing blocks, so that the difficulties could be overcome and designs with tone/ desired textured effect could be obtained.

The block printing if first done on paper and then transferred onto the fabric would simplify the printing as no aftertreatments are required. For this, transfer printing technique can be employed using disperse dyes.

Review of literature (7 ) on transfer printing indicated to the adaptibility of these experiments for printing on paper. The transfer printing paper so prepared can then be used for textiles by use of simple apparatus (like hot iron).

Transfer printing is being successfully done on synthetic fabrics and constant research is being done to extend its application for cotton and polyester:cotton blends. Cotton fabrics and its blends with polyester are more common in

India than 100 percent polyester fabrics due to the climatic conditions. To enhance the research work and to find out its practical significance for transfer printing of cotton and polyester:cotton blends synthetic polymer emulsions were tried out.

From the literature it was noted that the various treatments for modification of cellulose to make it receptive for disperse dyes were being carried out, most common being the resin treatments and use of swelling agents (1, 7, 13, 24 ). But little work has been reported using synthetic polymer emulsions. Moreover little attention has been given to the use of such components to see their influence on the transfer printing ability.

Thus, the study includes the transfer printing on cotton, polyester:cotton blends and polyester fabrics. The synthetic polymer emulsions are used as a finish on the fabrics, as well as a paste-component. Their use in combinations as a finish and a paste component would help to arrive at optimum conditions for good prints.

The specific objectives of the present study were:

1. To study in brief the history of techniques used for textile printing as the background of the work.
2. To prepare simple designs and to analyse these designs for their suitability for producing different effects

by printing.

3. To compare the effects obtained by block printing with different materials like linoleum, dotted rubber and U-foam, to get varying designs and tone effect.

4. To study the transfer printing on cotton, polyester: cotton and polyester fabrics by using synthetic polymer emulsions as a finish and in the printing paste, and in combination of finish/paste.