

III Year B.Tech. Textile Technology II - Semester

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TT 324 TECHNOLOGY OF PRINTING AND FINISHING

Course Description & Objectives:

Main objective of this course is to study thoroughly the printing and finishing of textile fabric. Different methods and style of printing has been discussed. The after finishing becomes the final product. The evolution and durability of the process is also discussed.

Course Outcomes:

1. Students will able to understand the importance of printing and finishing (value addition) of textile yarn and fabric.
2. They will able to find the effect of different process chemistry and machine related to the process.
3. They will know the characterization of the processed fabrics.

UNIT I - Textile Printing And Process

Introduction of Printing: Differences between printing and dyeing styles of printing Direct, Discharge and Resist styles of printing Methods of printing, Block , roller, screen and transfer methods Defects in printing and their remedies.

Printing Paste: essential ingredients and their functions, Types and properties of thickening agents Rheology of printing paste, methods of measuring it.

Printing Procedure: preparation of fabric for printing, preparation of printing paste, printing, drying after printing, dyestuff fixation final treatment (washing off).

UNIT II - Style Of Printing

Brief discussion on printing recipes direct, discharge and resist styles of printing, Printing of cotton and viscose Rayons, Wool and Natural Silk, Nylon, Polyester and its blends, Arcylics.

UNIT III - Textile Finishing And Easy Care Finish

Introduction to Finishing: Objectives of finishing, drying of textile with emphasis on stenter drying, calendaring, different types, raising and shearing.

Shrinking Process: Mechanism of shrinkage pre shrinking of cotton goods and machines used.

Crease: Mechanism for crease formation. Wash and wear finish, Durable press finish, Brief description of DMU, DMEU, DMDHEU and DMEDHEU, Dimethylol ethyl carbonate, Dimetholethyl triozone, non formaldehyde anti crease agents.

UNIT IV - Softening And Special Finish

Special Finishes: water proof finishes, water repellent finishes, flame proof, flame retardant finishes, moth proof, mildew finish, softening and silicon finishes. stiffening agents, Soil release finish, Anti static finish, Anti pilling finish.

UNIT V - Finishing Of Wool And Colour Fastness

Finishing of woolen goods, felting of wool, milling, defelting of wool, setting of woolen goods, crabbing, potting, decatizing and heat setting of synthetic fibres.

Colour Fastness of Dyed and Printed Goods: General Principle of colour fastness testing, sample preparation, multifibres, grey scale, conditions of viewing and illumination. Colour Fastness to washing, Rubbing, Perspiration, Light, Sublimation, Bleaching with hypochlorite and Peroxide, atmospheric ozone, Dry-cleaning and saliva.

TEXT BOOKS:

1. V.A.Shenai, "Technology of Printing", Sevak Publication, 1998.
2. A K Roy Choudhury, "Textile Preparation and Dyeing" Science Publishers, January 9, 2006.

REFERENCE BOOKS:

1. J.T.Marsh, "Introduction to Textile Finishing", Textile Trade Press, England,1996.
2. L.W.C.Miles, "Textile Printing", Dyers Company Publication Trust, 1998.
3. V.A.Shenai, "Technology of Finishing", Sevak Publication,1996.
4. R.S.Prayag, "Technology of Finishing", Shree J.Printers,1998.