(iv)TRADE : TEXTILE WEAVING

12th VOCATIONAL

PAPER-I **FABRIC STRUCTURE AND DESIGNING**

THEORY

Time : 2 hrs

Theory : 30 Marks

InA : 10 Marks

Practical : 50 Marks

Total : 90Marks

- An Introduction to Compound and Complex Weaves-Broken Twill, Mixed Twill, Transposed Twill, Fancy Twill, Satin and Sateen, Mockleno, Bedford-Cord, Corduroy and Huck-A-Back, Swivel, Double Cloths, Honey Comb Weave.
- Weaving Defects and their Remedies, Defects - Broken ends, Miss Pick,Reed Effect, Double End, Float ,Crack, Oil Stains,Temple Marks.
- Identification of Face and Back of Cloth, Warp and Weft.
- Cloth Analysis - Importance, Instructions, Procedure and Introduction.
- Introduction to Computer Aided Designing.
- Colour - Theory of Colour, Qualities of Colours, Colour Wheel, Colour Schemes, Psychological Impact of Colours and Factors Affecting Choice of Colours.
- Counting Glass – Definition, Introduction, Importance and Uses.
- Introduction to Indian Traditional Textile - Phulkari, Kullu Shawls, Chickenkari Work, Kashmiri Embroidery, Pashmina.

FABRIC STRUCTURE AND DESIGNING

Time: 3 hrs **PRACTICAL** **Marks : 50**

- Preparation of warp, drafting, denting and drawing for plain, twill, mockleno, Bedford- cord and huck-a-back weaves on the power loom.
- Analysis of cotton, silk and worsted cloth samples with different weaves andpatterns.
- Removal of cloth defects on the loom.
- Prepare a scrap file of cloth defects by collecting sample from market/ cloth shops.
- Introduction to computer aided designing.
- Colour - Wheel, tins and tones, combinations and schemes.
- Sketching of floral and geometrical motifs.
- Practice of counting glass for analysis of cloth.
- Visit to Museums, Art galleries, Craft Meals and report writing of the craft appraisal.
- Prepare minimum five design samples of 2/2 twill weave, Satin and Sateen on a frame of wooden frame 2x2 feet or on Graph Papers.

TRADE : TEXTILE WEAVING

12th VOCATIONAL

PAPER-II **TEXTILE TESTING AND DYEING**

THEORY

Time : 2 hrs

Theory : 30 Marks

InA : 10 Marks

Practical : 50 Marks

Total : 90Marks

- Importance and Objects of Textile Testing and Quality Control.
- Introduction to ISO 9000 (International Standards Organization) and TQM(Total Quality Management) Concept.
- Define Fibre, Fineness, Fibre Length, Fibre Maturity, Moisture Content in Fibres and Humidity.
- Physical Testing for Count of Yarn, Twist of Yarn, Yarn Ply, Types of Yarn, Tensile Strength of Yarn, Shrinkage of Cloth, Crease Resistance, Strength of Cloth and Abrasion Test.
- Chemical Testing for Damage to Cellulose and Animal Fibres, Colour Fastness to Washing, Sunlight, Rubbing, Bleaching and Crocking.
- Quantitative and Qualitative Analysis of Blends - Terricot, Terrywool, Viscos and Cots wool.
- Preparation of Material Before Dyeing i.e. Scouring, Boiling, Washing, Bleaching.
- Dyeing Process on Cotton, Wool, Silk and Synthetic (Polyster) Fibres using Direct Dyes, Acid Dyes, Basic Dyes, Reactive Dyes, Vat Dyes, Indigosol Dyes, Mordant Dyes, Azoic Dyes and Disperse Dyes According to Their Dyeing Suitability.
- Dyeing of Silk and Wool By Chrome and Procian Dyes, Dyeing of Polyester by Disperse Dyes.

TEXTILE TESTING AND DYEING

Time: 3 hrs **PRACTICAL** **Marks : 50**

- Find the yarn count of given piece of cloth by Besseley's balance and by physical balance.
- Find the crease resistance angle of a given sample.
- Find the shrinkage percentage of a given sample.
- Find percentage of different fibres from a given sample.
- Preliminary treatment to cotton & woolen cloth or yarn before dyeing.
- Practice of sample dyeing on cotton yarn/ fabric with direct, vat, azoic and reactive dyes.
- Practice of sample dyeing on woolen yarns/ fabric with acid and reactive dyes.
- Practice of sample dyeing on silk and wool with chrome and procian dyes.
- Practice of sample dyeing on polyester with disperse dyes.
- Collect the samples of dyed clothes from market.

TRADE : TEXTILE WEAVING

12th VOCATIONAL

PAPER-III **POWERLOOM MECHANICS & OPERATIONS**

THEORY

Time : 2 hrs

Theory : 30 Marks

InA : 10 Marks

Practical : 50 Marks

Total : 90Marks

- History of Loom.
- Introduction to Parts of Power Loom and their Functioning, Types of Power Looms - Air Jet, Water Jet, Dornier, Automatic, Shuttle less and Computerized Looms.
- Passage of Warp on Power Loom Detail Study with Sketch.
- Timing and Working of Power Loom.
- Introduction to Different Types of Dobbies - Knowles' Positive Dobby, Negative Dobby, Single Chain, Double Chain and Hetter Sley.
- Introduction to Different Types of Jacquards - Single Cylinder, Single Lift Jacquard, Double Cylinder, Double Lift Jacquard.
- Introduction to Temple, Types of Temples and their uses.
- Different Motions of the Power Looms : Primary - Shedding, Pickling & Beating Up, Secondary - Taking Up and Letting Off, Auxiliary - Warp Stop Motion, Weft Fork Motion, Loose Reed Motion, Fast Reed Motion.
- Checking of Power Looms Before Operation and General Precautions.
- Maintenance Steps of Power Loom for Efficient Working.
- Making of Lattice and Pegging According to the Design of the Cloth to be Woven on a Dobby Power Loom.

- Sketching of Design on Graph Paper, Card Punching and Lacing to Make a Chain for the Jacquard, Introduction to Piano Cards Cutting Machine.

POWERLOOM MECHANICS & OPERATIONS

Time: 3 hrs **PRACTICAL** **Marks : 50**

- Identification of different parts of power loom.
- To prepare lattice as per given design or sample.
- To prepare chain for the jacquard as per given design.
- Draw outline of warp Gaiting up procedure.
- Creation of design using CAM (computer aided manufacturing) - strip pattern and check pattern.
- Draw patterns of NED Graphics.
- Make a file showing different parts of loom.
- Practice of weaving of cloth on plain, dobby and jacquard loom.
- Visit to reputed power loom industry, on the job experience and report writing forthe same.

(v)TRADE : KNITTING

12th VOCATIONAL

PAPER-I **TEXTILE YARN CALCULATIONS AND GARMENT MAKING**

THEORY

Time : 2 hrs

Theory : 30 Marks
InA : 10 Marks
Practical : 50 Marks
Total : 90Marks

- **Definition of Count. Indirect System and Direct System of Yarn Count, Weight and Length Measure Chart for Different Systems.**
- Formulas for Production Calculation of Knitting Machines.
- Calculation to Find Gauge of Circular Knitting Machine and Flat Knitting Machine.
- How to find Courses and Wales per Inch/Stitch Density/Yarn Crimp.
- Brief Explanation of Machines used for Sewing Knitted Garments. (Over Lock, Flat Lock, Sewing Machine Etc.)
- Different Types of Garments Made from Knitted Fabrics.
- Different Sizes Charts of Garments.