

- 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 for the 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 : 90 Marks

- **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.

- Brief Introduction of Taxes on Knitting Yarn and Hosiery Products.
- Profit and Loss Calculation Regarding Hosiery Products.
- How to Calculate the Cost Price of Finished Products.

**TEXTILE YARN CALCULATIONS AND
GARMENT MAKING
PRACTICAL**

Time : 3 hrs

Marks : 50

- Adjustment of the knives of the over lock machine.
- Identification and functioning of different parts of over lock machine.
- Adjustment of the needle of over lock machine.
- Adjustment of the loops of the over lock machine.
- Method of calculation cost per piece in knitting industry.
- Drafting of Pull-over, Slipover, Cardigan and undergarments (Vests and Under-wears).
- Cutting and making of V-neck slip-over.
- Cutting and making of pull-over.
- Cutting and making of half-sleeve vest.
- Board pressing of knitted garments.
- Mending, pressing, labeling, folding and packing of finished product.

TRADE : KNITTING

12th VOCATIONAL

PAPER-II

CIRCULAR KNITTING

THEORY

Time : 2 hrs

Theory : 30 Marks

InA : 10 Marks

Practical : 50 Marks

Total : 90Marks

- Classification of Circular Weft Knitting Machine.
- Different Parts of Circular Knitting Machine and their Functions.
- Effects of Good Winding in Knitting and Importance of Lubrication in Knitting Industry.
- Different Types of Sinkers and their explanation with Diagram.
- Knitting Movements of Latch Needle and its synchronization with other loop forming knitting element.
- Cam Set of Simple Circular Knitting Machine.
- Explain Jacquard design in Knitting.
- Different Mechanism of Jacquard Designing (Wheel, Drum, Electronics)
- Explanation of Pattern Wheel Mechanism with Diagram.
- Difference Between Auto Striper and Feeder Striper Circular Knitting Machine.
- Introduction of Auto Striper Circular Knitting Machine.
- Introduction of Two Track and Four Track Circular Knitting Machines.
- Importance and applications of Software for Knitting Graphic Designing.

CIRCULAR KNITTING

Time : 3 hrs

PRACTICAL

Marks : 50

- Identification of cams from a cam-system of a circular knitting machine.
- Formation of welt on a circular knitting machine.
- Disassembling and assembling of cam set/system.
- Jobbing-on and running on operations.
- Setting of stitch-length for stitch/loop setting.
- Transferring of loop stitch from one needle to another needle.
- Adjustment of centre and timing of dial and cylinder.
- Threading of yarn from bobbin stand/creel to yarn feeder and guide.
- Calculation of the designing area of two/four pattern wheel circular machine.
- Drafting of design on graph paper.
- Filling of bits in pattern wheels according to design.
- Setting of pattern wheels with cylinder and knitting a designed fabric.

- How to use machine tools for computerized knitting machines.
- Create graphic design on computer in ms paint software (bmp file)

TRADE : KNITTING

12th VOCATIONAL

PAPER-III

FASHIONED KNITWEAR

THEORY

Time : 2 hrs

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

- Identification and Functions of Different Parts of Hand Flat Jacquard Knitting Machine.
- Operation of Hand Flat Jacquard Knitting Machine.
- Producing a Plain Knitted Fabric (Single Bed) on Hand Flat Jacquard Knitting Machine.
- Producing a 1×1 and 2×2 Rib on Hand Flat Jacquard Knitting Machine.
- Explain with Diagram the Loop-Formation of Latch-Needle on Hand Flat Jacquard Knitting Machine.
- Explain with Diagram the Tuck Formation of Latch-Needle on Hand Flat Jacquard Knitting Machine.
- Explain with Diagram the Cam Set of Hand Flat Jacquard Knitting Machine.
- Types of Knitted Fabric Produced on a Hand Flat Jacquard Knitting Machine.
 - Knitting of Fashion Garments
 - Narrowing
 - Widening
- Automation in Knitting Machines.
- Importance and application of Software for Knitting Graphic Designing.
- Introduction of Different Kind of Computerized Flat Knitting Machines.
 - Stoll Computerized Flat Knitting Machine.
 - Sheima Computerized Flat Knitting Machine.
 - Steiger Computerized Flat Knitting Machine.
 - Universal Computerized Flat Knitting Machine Etc.
- BMP Design Conversion Into Different Types of Software According to the Knitting Machine used.

FASHIONED KNITWEAR

Time : 3 hrs

PRACTICAL

Marks : 50

- Identification and functions of different parts of Hand Flat Jacquard Knitting Machine.
- Disassembling and assembling of the parts of Hand Flat Jacquard Knitting Machine.
- Jobbing-On operation, Running-On operation and winding off operation.
- Starting sequence of the machine.
- Plain Knitting 1x 1 rib and 2 x 2 rib on hand flat machine.
- Adjustment of Stitch-cam for stitch setting.
- Adjustment of Brushes and Yarn Guides.
- Producing (i) Decca-Design (ii) Rack-Design. (iii) Jacquard-Design, (iv) Tuck-Design.
- Knitting-(i) Half cardigan (ribs) (ii) Full cardigan (ribs).
- Knitting-(i) Pull-over (ii) Slip-over.
- Use of machine tools for computerized Flat knitting machines.
- Graphic Designing on computer, create BMP (bitmap image file).
- BMP Design conversion into different types of Software according to the knitting machine used.