

## **(v) TRADE : KNITTING**

### **12<sup>th</sup> 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**

**Time : 3 hrs**

##### **PRACTICAL**

**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

### 12<sup>th</sup> VOCATIONAL

#### PAPER-II

#### CIRCULAR KNITTING

##### THEORY

Time : 2 hrs

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

- 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 Stripper and Feeder Stripper Circular Knitting Machine.
- Introduction of Auto Stripper 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/creeel 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

### 12<sup>th</sup> VOCATIONAL

#### PAPER-III

#### FASHIONED KNITWEAR

#### THEORY

Time : 2 hrs

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

- 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.