

KNITTING TECHNOLOGY

Paper No HSCT (204)

ES - 2

Credits : 3 + 1 = 4

SEM – II (M.Sc. C.T.)

Marks : 100 +35=135

OBJECTIVES

- To gain experience in hand knitting and machine knitting]
- To know about Indian knitting industry.
- To develop an understanding of the various knitting structure.
- To understand stitching of knitted garments.

Unit-1

- Introduction to Knitting-definition of knitting, basic structural terms and principle of knitting technology, Difference between knits and woven.
- Development of knitting from hand knitting to machine knitting and further developments.
- Indian knitting industry -past, present and future

Unit-2

- Basic mechanical principles of knitting technology, elements of knitted loop structure, four primary base structures(pain, rib, interlock,purl),
- Weft knitting and warp knitting -terms and definition used related and warp knitting comparison of weft and warp knitting, classification of weft knitting machines and warp knitting machines.
- Weft knitting-Basic structure, stitches, designing of weft-knit structures, needles and yam selection for weft knitting .Quality control of weft knit fabrics, general calculation for weft knits.

Unit-3

- Warp knitting –development of warp knitting machines, basic warp knit structures and their representation, patterning mechanisms for warp knit designs, yarns for warp knits, general calculations for warp knits. Tricot and Raschel knits - Principle, machines and production methods.
- (a) The structure of a flat knitting machine:
 - Needle bed assembly.
 - The carriage.
 - Yarn feeding
 - Needle brushes
 - Fabric take-down
- (b) Manual operation of a flat knitting machine and circular knitting machine

Unit-4

- Knitted structures, structured knits, Jacquard knitting, intarsia knitting -Basic principle and stitches and their application.
- Electronics in knitting.
- Knitted garments-Cutting, stitching & Quality control of knitted garments.

Practicals

1. Learning to operate the flat knitting machine and circular knitting machine,
2. Making knitting samples with the 4 basic stitches (plain, rib, purl and interlock)
3. Analysis and testing of knitted samples.
4. Yarn calculations for weft and warp knits.
5. Visits to different knitting units

References

- David J. Spencer-Knitting Technology, Pergamon Press, U.K

- Prof. D.B. Ajgaonkar- knitting Technology,university publishing co - operation,Bombay.
- Dr.Samuel Raz – Flat knitting Technology,Germany.
- Terry Brackenbury-knitted clothing Technology-Blackwell science.