

**Scheme - I**  
**Sample Question Paper**

**Program Name** : Diploma in Textile Manufacturers  
**Program Code** : TX  
**Semester** : Fourth  
**Course Title** : Basic Knitting Technology  
**Max. Marks** : 70

22463

**Time : 3 Hrs.**

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**Instructions:**

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

**Q.1 Attempt any FIVE of the following.**

**10 Marks**

- a) Define the terms – (i) Course (ii) Wale
- b) Explain needle loop and sinker loop with the help of a neat diagram.
- c) Draw graphical representation of Purl structure.
- d) Draw loop diagram of technical face and technical back side of single jersey structure.
- e) Draw structure of float stitch and represent the same graphically.
- f) Draw diagram of closed pillar stitch and give chain notation for the same.
- g) Define stitch length.

**Q.2 Attempt any THREE of the following.**

**12 Marks**

- a) Draw diagram of 1 X 1 Rib structure. Give graphical representation and loop diagram of the same. State characteristics of the same.
- b) Describe passage of yarn on single jersey machine with the help of a neat diagram.
- c) List down various knitting elements on single jersey machine and state function of each of them.
- d) Give detailed classification of knitting machines.

**Q.3) Attempt any THREE of the following.**

**12 Marks**

- a) Compare woven and knit fabrics with respect to following points  
(i) Properties (ii) Production rates (iii) Raw material (iv) End uses
- b) Give chain link notations of both guide bars of following warp knit structures.  
(i) Locknit (ii) Sharkskin.

- c) Describe passage of yarn on flat knitting machine with the help of a neat diagram.
- d) Draw diagram of interlock structure. Draw graphical representation and loop diagram for the same. State characteristics of this structure.

**Q.4) Attempt any THREE of the following.**

**12 Marks**

- a) Explain knitting cycle on single jersey knitting machine with the help of a neat diagram
- b) Describe method of determining stitch length of a weft knitted structure. Explain how stitch length affects various properties of knitted fabric.
- c) Compare weft knitting with warp knitting with respect to following points. (i) Machine specification (ii) speed of machine (iii) structure of fabric (iv) Production rates (v) Properties of fabric (vi) Input material. (vii) Type of yarns used (viii) Cost of machine.
- d) Enlist various causes of following defects of weft knit structure
  - (i) Vertical lines (ii) Horizontal lines (iii) Drop stitches (iv) Distorted stitches
- e) Describe following terms in knitting- Stitch density, course length, open loop and close loop

**Q.5) Attempt any TWO of the following.**

**12 Marks**

- a) A circular weft knitting machine having 20 feeders running at a speed of 25 rpm, is knitting fabric with a stitch length of 0.15 inch with 756 needles in the machine. The efficiency of machine is 84% and count of yarn knitted is 20<sup>s</sup>. The fabric is knitted with 24 courses per inch. Calculate production in yards and pounds per hour.
- b) Describe the knitting cycle on Tricot knitting machine with the help of neat diagrams.
- c) Explain knitting cycle on interlock machine with the help of a neat diagram.

**Q.6) Attempt any TWO of the following.**

**12 Marks**

- a) Explain knitting cycle of Raschel warp knitting machine with the help of neat diagrams.
- b) Explain in details various method of ornamenting plain single jersey fabric
- c) A single jersey fabric is made on a machine with 2040 needles with 32 courses per inch from 20<sup>s</sup> cotton count yarn and 80 stitches per foot. Calculate the weight per linear meter.

**Scheme - I**  
**Sample Test Paper - I**

**Program Name** : Diploma in Textile Manufacturers  
**Program Code** : TX  
**Semester** : Fourth  
**Course Title** : Basic Knitting Technology  
**Max. Marks** : 20

22463

**Time : 1 Hour**

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**Instructions:**

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
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- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

**Q.1 Attempt any FOUR.**

**08 Marks**

- a) List down various applications of knitted structures
- b) Draw diagrams of face loop and back loop of weft knit structure.
- c) Latch needle is called as self acting needle - Justify
- d) State function of sinker on single jersey machine.
- e) State the effect of tuck stitches on properties of fabric.
- f) Explain tuck stitch formation with the help of a diagram.

**Q.2 Attempt any THREE.**

**12 Marks**

- a) Explain the knitting cycle on a Rib knitting machine with the help of a neat diagram.
- b) Draw diagram of a Purl structure, draw graphical representation and loop diagram of the same.
- c) Compare interlock structure with Rib structure.
- d) Classify weft knitting machines into various category.
- e) Explain in detail how horizontal and vertical stripes can be produced on single jersey machine.

**Scheme - I**  
**Sample Test Paper - II**

**Program Name** : Diploma in Textile Manufacturers  
**Program Code** : TX  
**Semester** : Fourth  
**Course Title** : Basic Knitting Technology  
**Max. Marks** : 20

22463

**Time : 1 Hour**

**Instructions:**

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order

**Q.1 Attempt any FOUR.**

**08 Marks**

- a) List down various applications of warp knitted structures
- b) Describe the both types of motions of guide bars on Tricot machine. State how these motions are derived.
- c) State the function of pattern drum on warp knitting machine.  
Draw diagrams of all types of chain links used on Tricot machine.
- d) Draw lapping diagram of both guide bars for Tricot stitch. Give their notation.
- e) State method to calculate stitch length of weft knitted structure.
- f) Define Tightness factor.

**Q.2 Attempt any THREE.**

**12 Marks**

- a) Compare warp knitting with weft knitting.
- b) Describe passage of warp on Tricot knitting machine with the help of a neat diagram.
- c) Describe passage of warp on Raschel knitting machine with the help of a neat diagram.
- d) A single jersey structure has 30 courses per inch, 24 wales per inch, length of yarn for 50 stitches is 8.75 inches, and the count of yarn is 20<sup>s</sup>. Calculate the weight in pounds per square yard and GSM.
- e) Draw lapping diagram of both guide bars of (i) Sateen (ii) Reverse Locknit. Give chain link notation for the same. State the characteristics of these structures.