

Time: 3.0 Hrs.

(Use separate answer script for Part : A and Part: B)
(All parts of a question must be answered consecutively)

Part : A

(Answer any three questions)

1. (a) How can you differentiate between face loop and back loop? Explain with figure.
(b) What is the principal knitting element?
(c) Draw and describe different parts of a compound needle.
(d) What is stitch density and what do you mean by 1.5E? [4+2+4+2=12]
2. (a) What is needle timing? State the synchronize timing and delayed timing.
(b) Describe in details the different steps of stitch formation on latch needle with figures.
(c) Compare between fabric machine & garment length machine. [4+5+3=12]
3. (a) Show the classification of weft knitting machine.
(b) If you want to convert an interlock machine into a rib machine, which setting will you have to change?
(c) For a plain circular knitting machine you have the following specifications:
Machine diameter: 30"
Gauge 24
No. of feeders 96
Machine speed 30 r.p.m
Machine efficiency 85%
If you want to produce a fabric with yarn count 28Ne which has 18 wpcm, 28 cpcm and stitch length is 2.5mm. then calculate the fabric width in cm, fabric length in meter, GSM and fabric production in kg/day. [2+4+6=12]
4. (a) What is double jersey structure and how will you identify rib, interlock and purl fabric?
(b) What are the main feature of flat knitting machine? State the function of carriage and cam system of flat knitting machine.
(c) What is drop or press- off stitch and how it can be formed? Describe with proper sketch. [4+4+4=12]

Part : B

(Answer any three questions)

5. (a) What is chain link? State the different types of link with proper sketch.
(b) Show the lapping diagram with chain notation of basic overlap or under lap variations.
(c) Which one you choose between pattern disc and pattern drum as pattern mechanism and why? [3+6+3=12]
6. (a) Mention the features of Raschel warp knitting machine.
(b) What is the guide bar nesting? Mention its significance.
(c) Explain the main fractures of reverse locknit, sharkskin and queen's cord fabric with lapping diagram and chain notation. [3+3+6=12]
7. (a) Compare between tricot sinker and raschel sinkers with figure.
(b) Sketch a 3D view of tricot sinker mentioning different parts.
(c) A 168 inch, 32 gauge tricot machine is operating at 300 courses per minute on a two bar machine. The warp is 70 denier nylon both in the front and back bars. The width of the fabric is 108 inches. The quality is eight inches per rack. The back bar run in is 64 inches and the front bar run in is 80 inches. Calculate
I) Ibs/linear yards
II) Ibs/sq yard
III) Racks per hour
IV) Couses per inch
V) Lbs/hour [4+3+5=12]
8. (a) What are the advantages of trick plate over conventional needle bar?
(b) Draw and describe the stitch formation cycle of double needle bar Raschel warp knitting machine.
(c) Draw lapping diagram from the following chain notation:
4-5/3-2/1-0/2-3/4-5