



Name :

Roll No. :

Invigilator's Signature :

CS/B.Tech (APM)/SEM-4/APM-403/2010

2010

BASICS OF TEXTILE MANUFACTURE-II

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) Cloth contraction owing to the interlacement of warp and weft is prevented by
 - a) front rest
 - b) reed
 - c) lease rod
 - d) temple.
- ii) Durable non woven fabric is used in
 - a) Carpet backing
 - b) Bandage
 - c) Diaper
 - d) Surgical mask.
- iii) One of the common features of all unconventional loom is
 - a) Weft accumulator
 - b) Noise level is high
 - c) Weft insertion method
 - d) Small wet package.



- iv) Keeping the warp thread in serial number is done by
- a) Reed b) Heald frame
c) Lease rod d) None of these.
- v) Maximum number of healds generally used for dobby shedding mechanism is
- a) 24 b) 8
c) 6 d) 40.
- vi) Uneven selvage occurs due to
- a) Broken dent
b) Uneven weft tension
c) Broken heald wire
d) Picker.
- vii) On a weft knitting machine, wales are formed by
- a) Needles b) Sinkers
c) Feeders d) Cams.
- viii) Which type of needle is called self-acting needle ?
- a) Bearded needle b) Latch needle
c) Compound needle d) None of these.
- ix) Sinkers are used in
- a) Single jersey machine
b) Interlock machine
c) Rib machine
d) None of these.
- x) On a weft knitting machine, positive feeders are mainly used for
- a) Higher production b) Design flexibility
c) Uniform yarn feed d) Sensing of yarn break.



GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.

3 ∞ 5 = 15

2. What are the primary motions for weaving ? What are the additional motions if weaving is to be of continuous type ?
2 + 3
3. What are the common features of shuttleless looms ?
4. What limitations do non-woven fabrics have ?
5. Give a thorough classification of knitting machines.
6. Give a comparative statement between Rib and Interlock machines.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.

3 ∞ 15 = 45

7. a) What are the chief features of automatic power loom ?
b) What is selvedge ? What is its function ?
c) Why is the selvedge motion required in unconventional loom ?
d) What are drafting, denting and dropper pinning ?
4 + 5 + 2 + 4
8. a) What are the advantages of a conventional loom ?
b) What are the objects of weaving preparatory ?
c) Mention the weaving preparatory process sequences and their objectives.
4 + 2 + 3 + 6



9. a) What are the differences between water jet loom and air jet loom ?
b) Write brief note on rapier loom.
c) Discuss the merits and demerits of water jet loom.
5 + 5 + 5
10. a) What is Dobby ? Discuss the working of any one type of dobbie.
b) Discuss the use of Dobby.
c) What are disadvantages of Dobby shedding ?
d) Discuss the advantage jecquard machine.
1 + 5 + 3 + 3 + 3
11. a) With the help of a suitable diagram, show the different parts of a latch needle and mention their functions.
b) Explain the loop forming cycle of a weft knitting machine using latch needle.
c) What is GSM and how can you vary this on a weft knitting machine ?
5 + 7 + 3
12. a) What is the basic difference between warp knitting and weft knitting ?
b) What would be the production in kg/hour of a single jersey weft knitting machine of 30 inch diameter, 28 Gauge and 96 feeders running at 25 rpm producing single jersey cotton fabric of 2.5 mm stitch length and 30s yarn. Assume machine efficiency as 85%.
c) What are the main functions of sinker on a single jersey machine ?
5 + 7 + 3