





ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009
BASICS OF TEXTILE MANUFACTURE-II
SEMESTER - 4



Time : 3 Hours]

[Full Marks : 70

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10 × 1 = 10
- i) A loom is a machine having at least
- a) 3 motions b) 4 motions
- c) 5 motions d) 7 motions.
- ii) For continuous weaving of the fabric, weaving machine requires
- a) shedding & picking b) beat-up
- c) take-up d) take-up & let-off.
- iii) Complicated designs like portraits, landscape, etc. can be woven with the shedding of
- a) Tappet b) Dobby
- c) Jacquard d) None of these.
- iv) Weft bar is due to difference in
- a) Material b) Colour
- c) Count d) Pick spacing.



v) Water-jet loom is having average picking speed of

- a) 44 ft/sec
- b) 80 ft/sec
- c) 100 ft/sec
- d) 160 ft/sec.



vi) Which needle is termed as "self-acting" needle ?

- a) Bearded needle
- b) Latch needle
- c) Compound needle
- d) None of these.

vii) On multi-track circular weft knitting machines, the number of tracks are generally

- a) two
- b) three
- c) four
- d) six.

viii) The extensibility of which weft knitted fabric is maximum ?

- a) Single jersey
- b) Rib
- c) Interlock
- d) Fleece.

ix) Stitch density is

- a) no. of wales in unit length
- b) no. courses in unit length
- c) no. of loops in unit area
- d) none of these.

x) Guide bars are used on

- a) circular weft knitting machines
- b) flat weft knitting machines
- c) warp knitting machines
- d) none of these.



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GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.



3 × 5 = 15

2. What are the objects of warping and sizing ?
3. What are the motions of a loom without any of which, weaving is not possible ? Explain.
4. What limitations do non-woven fabrics have ? What are the differences between woven and non-woven fabrics ?
5. Show with diagram, the different parts of a latch needle and mention their functions.
6. Compare weft knitting and warp knitting.
7. Discuss any two faults of woven fabric, their causes and remedies.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.

3 × 15 = 45

8. a) Discuss briefly how the woven fabric is formed. 5
- b) Show the passage of material on a loom with a schematic diagram. 5
- c) Why are heald frames not required in jacquard weaving ? 5
9. a) What are the disadvantages of conventional looms ? 4
- b) What are the objectives of shuttleless looms ? 4
- c) What are the differences between water-jet loom and air-jet loom ? 7



10. a) What are the important properties of non-woven fabrics? 5
- b) What are the different types of chemical and thermal bonding used in non-woven fabrics? Discuss the special features of each type. 7
- c) How are needle punched non-wovens different from chemical bonded non-wovens? 3
11. a) Why has knitting industry experienced a remarkable growth in the recent years? 5
- b) Explain with suitable diagram the loop forming cycle of a single jersey weft knitting machine using latch needle. 7
- c) Compare latch and bearded needle. 3
12. a) Explain the term 'needle gaiting'. How is it related to the double jersey weft knitting machines? 5
- b) What are the different types of warp knitting machines and how do they differ? 3
- c) What would be the theoretical production in kg of a 30 inch diameter and 90 feeder single jersey weft knitting machine, running at 25 rpm and producing plain jersey fabric of 2.5 mm stitch length using 30s cotton yarn? 7
13. a) What is dobby and what is jacquard? What are the differences between the two. 2 + 2
- b) Discuss the working of any one type of dobby. 5
- c) Discuss the working of any one type of jacquard. 6

END