



Name :
Roll No. :
Invigilator's Signature :

**CS/B.TECH(APM-OLD)/SEM-3/APM-303/2011-12
2011**

BASICS OF TEXTILE MANUFACTURE – I

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.

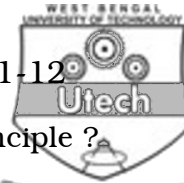
GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) Five slivers are doubled together and given three passages on draw frame. The number of doublings is
 - a) 125
 - b) 15
 - c) 9
 - d) 25.
- ii) Delivery speed of modern draw frame in metres per minute is
 - a) 150
 - b) 1500
 - c) 450
 - d) 1000.
- iii) 60s cotton count = Tex.
 - a) 10
 - b) 15
 - c) 9·84
 - d) 10·8.



- iv) DREF-3 is based on which spinning principle ?
- a) False-twist b) Friction spinning
c) Self-twist d) Ring spinning.
- v) Most common material for sewing threads is
- a) cotton b) linen
c) silk d) viscose.
- vi) Which of the following classimat faults is the most dangerous ?
- a) A1 b) G
c) D4 d) 12.
- vii) A textile fibre should have the characteristic of
- a) hardness b) flexibility
c) moisture d) lustre.
- viii) Only natural filament fibre is
- a) silk b) wool
c) cotton d) glass.
- ix) Short staple cotton fibre is shorter than
- a) $\frac{11}{8}$ inch b) 1 inch
c) $\frac{1}{2}$ inch d) $\frac{7}{8}$ inch.
- x) Moisture content of cotton fibre at normal temperature and R.H.% is
- a) 10% b) 8.5%
c) 7% d) 7.5%.



GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. What is textile fibre ? What are the main characteristics of textile fibre ?
3. Give a classification of textile fibres in flow-chart form with examples.
4. State five differences between mixing and blending.
5. What are the objects of yarn folding ?
6. Give causes and remedies of any *two* of the following faults :
 - a) Stitches or jail
 - b) Patterning or ribbon formation
 - c) Soft nose or base
 - d) Wild yarn.
7. Discuss the production process flow-chart from raw fibre selection to yarn winding for any conventional spun textile yarn.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

8.
 - a) What are staple fibre and filament ? Give an example of each.
 - b) What are the categories of vegetable fibres ? Give example.
 - c) State physical and chemical properties of cotton.

4 + 4 + 7



9. a) To which category does the wool fibre belong ?
b) What is the significance of microscopic appearance of wool fibre ?
c) What are Fleece wool and Pulled wool ?
d) State physical and chemical properties of wool.
1 + 3 + 3 + 8
10. a) Define ginning. What are the objects of ginning ?
b) Compare and contrast between saw gin and roller gin.
c) describe the working of a Two For One twister with neat sketch.
4 + 5 + 6
11. a) What are the objects of carding ?
b) Describe any standard 'blowroom line'.
c) Describe the operations in rectilinear cotton combing cycle with neat sketches.
4 + 4 + 7
12. a) State how the different factors of raw materials influence the spinning operation.
b) What is blending delay time ? Mention its significance in spinning.
8 + 7
13. a) What are the objectives of blending of textile fibres for making yarns ?
b) Discuss the advantages and disadvantages of blending at different stages of yarn manufacture.
c) Discuss the importance of each machine (for yarn manufacture) used for yarn making.
4 + 6 + 5

