

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2123)

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B. Tech 3rd Semester Examination
Textile Machines and Processes (O.S.)
TE-3001

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions in all selecting one question from each section A, B, C & D of the question paper and all the subparts of the questions in Section E. Use of non programmable calculators is allowed.

SECTION - A

1. (a) Discuss the scope of textile technology. What are the entrepreneurial opportunities for textile technologists?
(b) Discuss the direct and indirect numbering system.
(10+10=20)
2. (a) Describe the process of converting fibres into finished garments with the help of flow chart.
(b) Define Tex and English Count (Ne). Prove that $\text{Tex} = 590.5/\text{Ne}$.
(10+10=20)

SECTION - B

3. (a) Explain the basic requirements of fibre forming polymers.
(b) Explain the objectives of blow room? What are the machines used in blowroom?
(10+10=20)
4. (a) What is crystallinity and orientation? Explain the significance of orientation in fibre properties.

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- (b) Discuss the objectives of ring frame. Explain the process of yarn formation on ring frame machine. **(10+10=20)**

SECTION - C

5. (a) What are the objectives of winding?
(b) How beam warping is different from sectional warping?
(c) Discuss the basic motions of weaving. **(5+5+10=20)**
6. (a) What are the objectives of sizing?
(b) Discuss the role of doubling in the preparatory process.
(c) Differentiate between the conventional and nonconventional methods of weaving. **(5+5+10=20)**

SECTION - D

7. (a) What do you understand by singeing and desizing?
(b) What is Dyeing? Explain its classification. **(10+10=20)**
8. (a) Explain the working of J-box.
(b) Discuss various methods and styles of printing. **(10+10=20)**

SECTION - E

9. (a) Define Metric count.
(b) Name five natural fibres.
(c) What do you understand by polymerization?
(d) What is the function of twist in plied yarn?
(e) Define Nonwoven Fabrics.
(f) What is drawing in?
(g) Name basic weaves.
(h) How staple yarn is different from filament yarn?
(i) What is the function of comber in spinning?
(j) What is bleaching? **(2x10=20)**