

[Total No. of Questions - 9] [Total No. of Printed Pages - 3]
(2125)

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B. Tech 7th Semester Examination

Textile Machines (OS)

TE-7009

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 : The question paper consists of five sections A, B, C, D and E. The candidates are required to attempt five questions in all selecting one question from each of section A, B, C, D and all the subparts of the questions in Section E.

SECTION - A

1. (a) Classify the Indian Textile sector on the basis of technology used. (5)
- (b) Compare Indian cotton as compared to overseas cotton. Explain the main problems of Indian cotton. (7)
- (c) What is the importance of 'Quality'? (3)
- (d) What are the major aspects of quality for a yarn for a specific use? (5)
2. (a) Give an overview of decentralized small scale sector of Textile Industries in India. What steps are taken by Indian Government to revamp this sector? (10)
- (b) Draw a flow diagram for sequence of operation for conversion of silk filament to a finished fabric and mention the objectives of each stage in brief. (10)

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SECTION - B

3. (a) How the drafting, twisting and winding operations are achieved in Ringframe? (10)
- (b) Explain the design & working of an Extruder. (5)
- (c) Give a line diagram for polyester staple fibre production. (5)
4. (a) Describe the principle of winding in a modern Autoconer. (10)
- (b) Differentiate between carded & combed process for 100% cotton yarn production. (5)
- (c) How drawing process influence on structure & properties of fibre? (5)

SECTION - C

5. (a) Explain the different web forming techniques used in nonwoven manufacturing. (10)
- (b) Discuss the construction and function of different parts of Latch needle used in knitting machine with neat sketch. (10)
6. (a) Discuss in brief the methods of bonding nonwoven fabrics by different binding agents. (10)
- (b) Compare warp knitting & weft knitting process. (5)
- (c) What are the advantages and disadvantages of shuttleless loom over shuttle loom? (5)

SECTION - D

7. (a) Explain three bowl padding mangle. (6)
- (b) Write a short note on mechanical finish of man made fibres. (8)
- (c) What is meant by thermosol dyeing? Mention its application area. (6)

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8. (a) Differentiate between dying and printing. (4)
(b) Explain hot air circulation in stenter. (8)
(c) Classify finishes. (3)
(d) Describe friction calendar. (5)

SECTION - E

(All questions are compulsory)

9. (a) What is the difference between staple fibre & filaments?
Give examples.
(b) What is the function of cam?
(c) Write down the process sequence of 20s/1 combed
cotton yarn.
(d) What is the function of baffle plate in VK tube?
(e) Why carding is called as "Heart of Spinning"?
(f) What are the different types needles used in knitting?
(g) Differentiate between splicing and knotting.
(h) What is Pigment?
(i) Mention the dye-fibre linkage between reactive dye and
cotton.
(j) Which dye is suitable for dyeing of wool? (10×2=20)