

[Total No. of Questions - 5] [Total No. of Printed Pages - 2]  
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16055(D) - 0 DEC 2016

**B. Tech 3rd Semester Examination**  
**Textile Machines and Processes (NS)**  
**TE-211**

**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 :** Attempt five questions in all, selecting one question from each sections A, B, C and D. Section E is compulsory.

**SECTION - A**

- (a) Name five industries that are dependant upon or related to the textile industry and indicate how they are related? (10)
- (b) Define polymerisation. What are the basic requirements of a fibre forming polymer? (10)

OR

- (a) What is the difference between man made fibres of natural nonfibrous substances and natural fibres. (5)
- (b) Derive the relationship between English count and Denier. (5)
- (c) Define count of a yarn and give its significance. Differentiate between direct and indirect system of yarn numbering. (10)

**SECTION - B**

- (a) What are the objectives of the spinning machinery used for spinning cotton combed yarn? (10)
- (b) Discuss the different methods for the production of synthetic yarns. (10)

OR

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- (a) What are the objectives of warping and sizing? (10)
- (b) Differentiate between beam warping and sectional warping. (5)
- (c) Write a short note on drawing in. (5)

**SECTION - C**

- (a) How does the construction of knitted fabrics differ from that of woven fabrics? (5)
- (b) What are the secondary motions of weaving? (10)
- (c) Prepare a satin weave pattern. (5)

OR

- (a) Explain the difference between dyeing and printing. (10)
- (b) Write short notes on the working principle of:  
J-box, padding mangle, jigger, winch (10)

**SECTION - D**

- Why is finishing of the fabric necessary? What are the different types of finishes applied to the fabric according to end use? (20)

OR

What are the major processes involved in conversion of fabric to a finished garment? (20)

**SECTION - E**

- (a) What are the objectives of bleaching?
- (b) Define worsted count system.
- (c) Classify synthetic fibres.
- (d) What is the function of twist on plied yarns?
- (e) Enlist the various non conventional weaving processes.
- (f) What is the importance of scouring?
- (g) What two factors enter into the selection of a dye?
- (h) What are the essential differences between stock, yarn and piece dyeing? (8×2½=20)