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16205(D) - 0 DEC 2016

B. Tech 7th Semester Examination

Process Control in Textiles (NS)

TE-412

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 any one question from Section A, B, C and D. Section E is compulsory.

SECTION - A

1. What do you mean by process control in a Textile industry? Explain the concept of bale management in a spinning industry. Discuss various steps involved in bale management. Also explain how it helps in controlling the mixing cost and quality of the yarn. (20)
2. Explain in detail about the term yarn realization. Explain various factors which influence yarn realization. (20)

SECTION - B

3. State factors which influences cleaning efficiency of a blow room line with special reference to fibre and machine parameters. (20)
4. Explain the impact of percentage of noil extracted in a combing process on the quality of the yarn produced. How long and short term variations are controlled in yarn during its production? (20)

SECTION - C

5. What are the possible reasons for low productivity of material produced on warping and sizing machines? Discuss measures to improve efficiency of the sizing machine. (20)

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6. What do you mean by machine audit? How does it differ from quality audit done for ISO 9000? Explain the scope of process control in loom shed and explain about Snap Study carried out in loom shed. (20)

SECTION - D

7. Discuss in detail about various fabric defects which occur during loom process and also suggest techniques to remove these defects in future. (20)
8. Explain mechanism of peroxide bleaching process on cotton based material. Discuss various machine parameters which affect peroxide bleaching process. (20)

SECTION - E

9. Attempt all questions.
 - (i) Define Spinning Consistency Index (SCI).
 - (ii) Explain the term UHML.
 - (iii) Distinguish between tensile strength and bursting strength of a material
 - (iv) Define humidity and its impact on process control in spinning industry
 - (v) What are the functions of Hygrometer?
 - (vi) What are the different forms of fabric defects?
 - (vii) Define quality assurance.
 - (viii) Define standard error.
 - (ix) How quality circle helps to improve quality of product?
 - (x) What do you understand by revised ISO 9000 series standard? (10×2=20)