E 337

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2003.

Fifth Semester

Textile Technology

TT 335 — PROCESS CONTROL IN SPINNING

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by "closed loop" and "open loop" auto–levelling?

2. List down the key variables influencing the mix–homogenity of fibres.

3. What are the causes for nep formation in carding?

4. What are the factors to be considered to control waste at cards?

5. What is the effect of feed pedal distance, grid gaps on waste elimination in blow room?

6. What is productivity index?

7. What is snap study technique? List down some examples for avoidable causes that directly influence the efficiency of the ring frame.

8. What are the causes for between – bobbin count variation?

9. What are the causes and remedies for slubs and spinner's double?

10. What is the influence of humidity and temperature on polyester spinning?

PART B — (5 × 16 = 80 marks)

11. How will you assess the performance of a Blow Room? Explain with stepwise procedure. Compare with norms and explain with respect to collected waste and cleaning efficiency.

12. (a) What are the causes for hook formation at carding? Explain Hook formation and removal in draw frame and comber.

Or

    (b) What are the causes for nep formation and removal in carding? Explain the measurement of neps by AFIS–N and template method.

13. (a) What is the significance of modern developments in card and comber with respect to waste elimination and quality?

Or

(b) How does the optimum level of comber waste for a given mixing arrived? Discuss on the effect of machine/process parameters on waste elimination in comber.

14. (a) What are the causes and remedial measures for "within bobbin" and "between bobbin" count variation? Explain.

Or

(b) List down major yarn faults and package faults. Explain their causes and remedial measures.

15. (a) Describe about the processing conditions required for polyester and viscose in the spinning machinery.

Or

(b) What is 'spectrogram' and variance length curve? Explain how spectrogram can be used to identify the mechanical faults of the m/c. What is the importance of variance length curve?

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