

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2125)

15247

B. Tech 7th Semester Examination
Mechanics of Textile Process (OS)

TE-7002

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 one question from each section A, B, C & D.
Section E is compulsory.

SECTION - A

1. Explain about machines used for tuft opening and dust removal in Blow room line. Describe the basic principle of cone drum mechanism used in sketcher. (20)
2. Why do the majority of hooks in card sliver trail? How they are formed? Discuss the association between card factors and hooks formation. (20)

SECTION - B

3. Highlight the effect of poor performance of a drawframe in respect of different characteristics of succeeding stage of spinning. (20)
4. Discuss the effect of direction of feed on the noil extraction in combing. What do you mean by fractionating efficiency of a comber? (20)

SECTION - C

5. Describe the constructional features and working of any building motion to be used in speed frame. (20)

[P.T.O.]

2

15247

6. Derive the shape of a spinning balloon. Also prove that the limiting value of balloon radius is $\sqrt{2}$ times the balloon height. (20)

SECTION - D

7. Differentiate between knot and splice. What are the different methods of splicing the yarn? What are their relative merits and demerits? (20)
8. What are the different methods of applying tension to the yarn in winding and warping? Why and how is shuttle retarded in commercial practice? Explain. (20)

SECTION - E

9. (i) Why a loom using bigger shuttle size needs higher crank length?
(ii) Why conical package abrade more than cylindrical package during unwinding?
(iii) What are the chief disadvantages of tappet shedding mechanism?
(iv) Why are the amount of draft and doubling equal at drawframe?
(v) What are the balloon control rings?
(vi) Explain mechanism of slay eccentricity.
(vii) State function flyer. What is the difference between flyer leading and bobbin leading?
(viii) Explain basic principles of pneumatic transport of cotton in blow room.
(ix) Why do you reduce bumping during weaving?
(x) Differentiate between splicing and knotting of the yarn. (10×2=20)