J-21-0118

B. Tech. EXAMINATION, 2021

Semester VI (CBCS)

MECHANICS OF TEXTILE PROCESS

TE-606

Time : 2 Hours   *Maximum Marks : 60*

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D. Q. No. **9** is compulsory.

Section A

1. Illustrate the mechanism of piano feed regulating motion.   **15**

2. (a) Explain the mechanism of hook formation during carding operation.   **7.5**

(b) Justify the fibres transfer from cylinder to the doffer in a carding machine. **7.5**

Section B

3. What is drafting wave ? Explain the mechanism of drafting wave formation in a draw frame. **15**

4. Explain the effect of process parameter on FEI and combing efficiency for a comber. **15**

Section C

5. Design a cone drum for a speed frame assuming suitable data. **15**

6. Explain Balloon theory in ring spinning machine. **15**

Section D

7. Write a note on 'wind and traverse ratio.' **15**

8. Derive an expression of kinematics of slay for online position. **15**

(Compulsory Question)

9. (a) Define cleaning efficiency.

(b) Point to Point arrangement of tooth gives...............action.

(c) Which type of hooks in the sliver are removed in draw frame ?

(d) Noil percentage for fully combed material is about.................... .

(e) Draw a graph between bobbin diameter and spindle speed for a Speed Frame.

(f) With increment in balloon height, the yarn tension............(increases/decreases)

(g) Define stretch in sizing.

(h) Write formula of angle of wind.

(i) What is the cause of bumping condition ?

(j) What is False twist in speed frame ?

1.5×10=15