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RM-6601

B. E. II (Sem. IV) (T.T.) Examination

May / June – 2010

Yarn Manufacturing - II

Time : Hours] [Total Marks :

Instruction :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. E. 2 (Sem. 4) (T.T.)**

Name of the Subject :

☛ **Yarn Manufacturing - 2**

☛Subject Code No. : **6 6 0 1** ☛Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Answer to the **two** sections must be written in **separate** answer books.

(3) Figures to the **right** indicate full marks.

(4) Tie **two** sections separately.

Q1.[a] Do as directed:

i. Define – Draft. [1]

ii. If the hank of sliver fed is 0.016, draft is 6 and doubling is 6, what will be hank of delivered sliver? [1]

iii Draw axial flutes and knurled flutes. [2]

iv What is the major draw back of soft cot? [1]

v Draw fast boss and loose bush arrangement for Draw Frame drafting system. [1]

vi Explain the term 'Floating fibres'. [1]

vii The nip distance has to be always _____ than fibre length. [1]

viii Which machine is used in combination with super lap former for lap preparation? [1]

ix What is the function of spring in the can? [1]

[b] Discuss the various developments that have taken place in loading arrangement at Draw Frame. [10]

Q2 .[a] Describe Ideal theory of drafting with neat sketch. Can it be achieved in practice? Why? [10]

[b] Discuss planetary coiling mechanism with suitable diagram. [05]

OR

Q2 [a] The quality of lap produced, directly affects the performance of comber. Justify the statement. **[08]**

[b] Discuss the recommendations of Shirley Institute for designing drafting rollers. **[07]**

Q3 Write Short Notes [**ANY THREE**] **[15]**

1. Processing of man made fibres in Blow room.
2. Features of modern Draw frame.
3. Comber gauges.
4. Sliver lap machine.

SECTION - I I

Q4.[a] Do as directed:

i. In the drafting system of speed frame, loose boss Top rollers are used to achieve higher speed. (State True or false.) **[1]**

ii. During build up of roving package, Bobbin speed is decreased to maintain winding speed constant. (State True or false.) **[1]**

Iii For processing manmade fibres, load on the Top roller is _____ in speed frame. **[1]**

Iv Write the formula to calculate production of speed frame in pounds per shift. **[2]**

V Write the equation to calculate production of comber in terms of Kgs/ shift. **[1]**

Vi What is scratch combing? **[1]**

vii Combing is a discontinuous process. (True or False) **[1]**

viii State the objects of comber. **[2]**

[b] Discuss the limitations of conventional drafting systems on speed frame and explain various developments carried out in modern drafting system of speed frame to overcome these limitations. **[10]**

Q5 .[a] Explain the function of the builder on the flyer frame. With neat sketch explain the American builder mechanism. **[10]**

[b] Calculate Production of comber from following data: **[05]**

Feed /nip – 6 mm
Nips/min – 240
Noil – 10%
Hank of lap fed - 0.012
Efficiency – 88%

OR

Q5 [a] Describe with neat sketch Rovematic flyer and flyer assembly. **[09]**

[b] Derive equation for calculating noil% for backward feed comber. **[06]**

Q6 Write Short Notes **[ANY THREE]** **[15]**

1. Need and objects of speed frame.
2. Short process spinning.
3. Factors affecting optimum roving twist.
4. Differential motion.