

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 160401

Roll No.

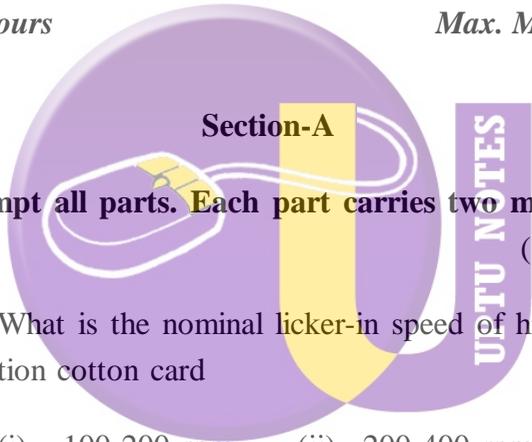
B.TECH.

Theory Examination (Semester-IV) 2015-16

YARN MANUFACTURE-II

Time : 3 Hours

Max. Marks : 100



- 1. Attempt all parts. Each part carries two marks.** (10×2 = 20)
- (a) What is the nominal licker-in speed of high production cotton card
- (i) 100-200 rpm, (ii) 200-400 rpm,
- (iii) 800-1200 rpm (iv) 2000-5000 rpm
- (b) The production of high production cotton card is in the range of
- (ii) 5-10 kg/hr, (ii) 10-20 kg/hr,
- (iii) 50-100 kg/hr, (iv) 200-400 kg/hr

- (c) The weight of five meter of finished sliver would normally lie between a) 2.5-5 g, b) 15-20 g, c) 10-150 g, d) 200-300 g
- (d) What happens if feed plate to licker-in setting is too close?
- (e) What is the maximum possible speed of doffer comb in carding machine?
- (f) What is the reason of higher wire point's density on cylinder surface?
- (g) The delivery rate of modern high production draw frame is in the range of-
- | | |
|----------------------|---------------------|
| (i) 100-200 m/min, | (ii) 200-400 m/min, |
| (iii) 500-900 m/min, | (iv) 1500-2000m/min |
- (h) Why feed roller is heavily loaded at each end?
- (i) Longer and finer fibres would require a card cylinder have:- a) higher wire point density, b) lower wire point density, c) greater wire height, d) lower speed
- (j) The reduction in nep level at card comes through:- a) crushing of neps between calendar rollers, b) removal of neps in the licker-in dropping, c) removal of neps in flat strip, d) disentanglement of neps.

Section-B

2. Attempt any five questions from this section. Each question carries ten marks. (10×5 = 50)

- (a) Discuss the role of back plate, front plate and carding segment during carding.
- (b) Explain the importance of feed plate design, notes knives and licker-in undercasing.
- (c) Explain the working of jute card with a suitable diagram.
- (d) Discuss the various faults in drawframe and their remedies.
- (e) Discuss the technological development in drawframe.
- (f) Discuss the factors deciding the roller setting in drawframe.
- (g) What is drafting wave? Discuss the limitations of graduated drafting system.
- (h) Describe the development in carding wires.

Section-C

Attempt any two questions from this section. (15×2 = 30)

3. What are merits and demerits of chute feed system? Also describe the working of double chute system with the help of neat sketch.
4. What is an autoleveller? Describe the working principle of short term autoleveller used in modern drawframe.
5. (a) One yard of lap weighs one pound, a sliver is made from this lap weighs 55 grins/yard and card extract 2% waste. Calculate the actual and mechanical draft.
(b) A draw frame has front roller running at 1400 rpm and has 2" dia. The tension draft between front roller and coiler calendar roller is 1.02. Calculate production at 80% efficiency when hank delivered is 0.15.