

17344

21819

3 Hours / 100 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any TEN of the following: **20****
- a) State the objectives of draw frame.
 - b) State the functions of lickerin.
 - c) Enlist the important settings in carding.
 - d) State the necessity o/s polishing of card clothing
 - e) State the speed range of lickerin, cylinder and doffer of modern card.
 - f) Six silver of hank 0.12 are doubled at draw frame having a draft 8, then find the hank of silver delivered
 - g) State the necessity of autoleveller in carding.
 - h) Find the weight of lap feed in gram / meter at carding machine if the total draft is 100 and hank of silver delivered is 0.12.

P.T.O.

- i) State the necessity of stripping of card clothing.
- j) State the functions of crushing rollers in modern card.
- k) Enlist the various element of drafting arrangement.
- l) State the function of cylinder under casing.
- m) State the range of cot hardness used in draw frame.
- n) Define Draft.

2. Attempt any FOUR of the following: 16

- a) Differentiate between lap feed and chute feed system (any four points).
- b) State the objectives of carding.
- c) With neat sketch describe passage of material through draw frame.
- d) Explain any four modern developments in draw frame
- e) Explain the following important operating parameters of card clothing used in cylinder:
 - (i) Point Density
 - (ii) Carding angle.
- f) Describe with neat sketch short term autolevelling in carding.

3. Attempt any FOUR of the following: 16

- a) State any FOUR defects causes & their remedies in draw frame.
- b) A certain draw frame with 57 teeth draft change pinion is delivering 46 grains/yards silver from 44 grains/yards fed with no of doublings is 6. What will be the pinion required if 51 grains/yards silver is to be produced?
- c) State the necessity of grinding and also explain grinding operation in card maintenance.
- d) Draw and label CRV unit used in carding.
- e) Explain the auxiliary carding aids used in modern cards.
- f) Draw and label the passage of material through carding machine.

4. Attempt any FOUR of the following:**16**

- a) Calculate the production of carding machine in kg/shift with following particulars:
- (i) Doffer speed = 43 rpm
 - (ii) Doffer diameter = 26 inch
 - (iii) Weight of silver = 4.92 gm/mt
 - (iv) Efficiency = 88%
 - (v) Tension draft = 1.1
- b) State any four modern developments in carding.
- c) Explain with neat sketch principle of roller drafting.
- d) Describe with neat sketch the auto levelling system in modern draw frame.
- e) Explain various types of roller weighting systems used in draw frame.
- f) Explain the flats on carding machine with respect to following points:
- (i) Functions of flat
 - (ii) Movements of flats
 - (iii) Cleaning positions in the region of flat
 - (iv) Setting between flat and cylinder wire points

- 5. Attempt any FOUR of the following:** **16**
- a) State the factors influencing on drafting.
 - b) If the surface speed of front roller of drawing frame is 198 meter per minute. The draft between coiler calendar roller and front roller is 1.05 then calculate the production per shift of 8 hours with 88% efficiency and with 4.98 kilotex silver being delivered.
 - c) Describe with neat sketch the horse fall grinding
 - d) Explain the waste disposal systems used in modern cards.
 - e) State any four defects , causes and their remedies in carding.
 - f) Calculate the total draft of carding machine from following particulars.
 - (i) Doffer diameter = 25"
 - (ii) Doffer speed = 32 rpm
 - (iii) Lap roller diameter = 150.8 mm
 - (iv) Lap roller speed = 3 rpm
 - (v) Doffer to coiler calender roll tension draft = 1.1.
- 6. Attempt any FOUR of the following:** **16**
- a) Explain Giling of Silver in carding
 - b) Give the classification of card clothing and also explain each of them in detail
 - c) State the advantages of unidirectional feed at lickerin region over conventional feed
 - d) With neat sketch describe the procedure to do roller setting in draw frame
 - e) Describe with neat sketch 3 over 5 roller drafting arrangement
 - f) State the limitations of conventional drafting arrangement.
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