



17344

14115

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 five** of the following : **20**
- a) What are the objects of card ? What things should not occur in carding ?
  - b) How to calculate cleaning efficiency of card ? What is the norm for cleaning efficiency of very high production card ?
  - c) Explain the function and working of crush rollers in card with sketch.
  - d) What are the types of sensors (measuring devices) used in Autoleveller at card ? Explain the working of any one type with sketch.
  - e) What are the objects of draw frame ?
  - f) What are the requirements of drafting arrangement ?
  - g) What is sliver data monitoring system ? How it is helpful for controlling quality of sliver ?
2. Attempt **any two** of the following : **16**
- 1) Explain the working of modern card with sketch.
  - 2) What is the function of flats ? Draw the cross-sectional view of flat. Illustrate heel and toe arrangement between flat and cylinder with sketch.
  - 3) Describe the working of medium term autoleveller in card with neat sketch.

**P.T.O.**



3. Attempt **any two** of the following : 16
- a) i) State importance of wire sharpners.  
ii) Draw the sketch of carding bars (plate) at front and back of card and label the parts. What are the advantages of using carding bar (plate) ?
  - b) i) Why doffer comb can not be used when speed of doffer in modern card is 25-40 rpm ?  
ii) Draw any one modern draw-off-roller's assembly used instead of doffer comb, explain its working.
  - c) Calculate the production of card in kg/shift at 80% efficiency :  
Doffer speed = 40 rpm                      Doffer diameter = 27 inch  
Grams/meter of sliver = 3.5      Tension draft = 1.3.
4. Attempt **any two** of the following : 16
- a) Explain the any chute feed system on modern card with sketch.
  - b) What are the different types of card clothing ? What are the different factors to be consider while selecting a card clothing ?
  - c) i) What are the modern developments in card ?  
ii) What are the defects in carding ?
5. Attempt **any two** of the following : 16
- a) Describe passage of material through draw frame and label the parts.
  - b) What are the different factors that affect the draft in draw frame ?
  - c) Calculate the production of D/F working with following particulars in kg/delivery/shift :
    - 1) Front roller speed = 250 m/min.
    - 2) Hank delivered = 0.18
    - 3) Efficiency = 80%.
6. Attempt **any two** of the following : 16
- a) Draw the sketch of 4/3 modern roller drafting indicating, their setting, diameters of roller and giving their advantages.
  - b) i) What are the features of modern draw frame ?  
ii) What are the defects in draw frame ?
  - c) i) Six silvers of hank 0.14 are doubled at draw frame and draft is 8, then what is the hank of sliver deliver ?  
ii) What is floating fibres ? Give its importance on quality of sliver and drafting.
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