

22245

24225

3 Hours / 70 Marks

Seat No.

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

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) Define staple fibre and filaments with examples.
- (b) State the objectives of ginning process. List down the machineries used for ginning process.
- (c) State the objectives of carding process.
- (d) Explain the objectives of combing process.
- (e) State the function of grid bars in blow room machines.
- (f) List down different types of cages. State function of cage.
- (g) State the advantages of electronic feed regulation system.



**2. Attempt any THREE of the following : 12**

- (a) State the function of mixing in blow room. Also state the disadvantages of manual mixing.
- (b) Differentiate between natural fibres and man-made fibres.
- (c) Differentiate between hand picking and machine picking.
- (d) Explain the various factors influencing opening and cleaning.

**3. Attempt any THREE of the following : 12**

- (a) State the advantages of automatic mixing compared to manual mixing.
- (b) Draw neat labelled sketch of Axi flow cleaner.
- (c) Explain the opening process in blow room line by considering following parameter :
  - (i) Types of opening
  - (ii) Degree of opening
- (d) Explain the conventional lap forming unit with neat sketch.

**4. Attempt any THREE of the following : 12**

- (a) State the objectives of cleaning operation in blow room. Also define cleaning efficiency with formulae.
- (b) Draw neat labelled sketch of step cleaner.
- (c) State the role of cages in blow room. Also explain the various types of cages.
- (d) Differentiate between conventional bale opener and automatic bale opener.
- (e) State the features of securomat.

**5. Attempt any TWO from the following : 12**

- (a) Give the classification of Textile fibres in detail. Also explain the physical properties of any two textile fibres.
- (b) Describe the construction and working of saw-gin machine with neat sketch.
- (c) Draw the flow chart for conversion of cotton fibres to yarn for both carded and combed yarn with the input and output from each process. Also differentiate between carded and combed yarn.

**6. Attempt any TWO from the following : 12**

- (a) Find the production of the scutcher per shift of 8 hours. If 10" diameter of lap roller running at 9 rpm delivers a lap of 14.2 OIS/yard. The working efficiency of the machine is 90%.
  - (b) State the objectives of blow room process. Also explain hopper feeder with neat sketch.
  - (c) Describe the various methods of transportation of material through blow room lines.
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