22676

24225

3 Hours / 70 Marks   Seat No.

Instructions –   (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answer 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: **10**

a) List down broad areas of with respect to which key variable need to be identified for excersing process control in spinning.

b) List down the fiber properties which you would like to take into consideration for controlling mixing quality and cost.

c) Give norms for collected waste at blow-room and card.

d) Explain the relationship between precomb draft and noil extracted at comber.

e) State the ATIRA norms for between bobbin and within bobbin CV% of lea count of –

   i)   Coarse and medium count

   ii)   Counts finer than 60^S.

f) Elaborate the causes of spinner's doubles.

g) Explain causes of crackers.

h) Define MPI and LER.

Marks

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

   a) Elaborate scope of process control in spinning.

   b) Elaborate the method to be adopted for measuring cleaning efficiency at blow-room. Also explain measures to be taken to improve cleaning efficiency.

   c) Elaborate measures to be taken to control CV% of lea count on rotor spinning machine.

   d) Elaborate the importance of energy conservation in a spinning mill.

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

   a) List down the fiber characteristics that can be determined by –

   i)   HVL

   ii) AFIS

   Elaborate how mixing quality and cost can be controlled through fiber-characteristics.

   b) Describe the method of measurement of within bobbin count variation (cv% of lea count). State the norms for the same. Suggest measures to control it.

   c) List down causes of end breakage at rotor spinning. State remedies for the same.

   d) Describe steps to be taken for doing energy conservation in a spinning mill.

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

   a) Describe methods to control cleaning efficiency and waste%. CV% of sliver wrapping at card.

   b) List down the factors affecting yarn strength.

   c) Elaborate the method to improve productivity at ring frame.

   d) Explain causes and remedies of various package defects at rotor spinning.

   e) Define machinery audit. Describe how machinery audit is implemented in each department of spinning. Also list down various instruments used for the same.

Marks

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

   a) Define 'Yarn Realisation' and explain its importance. Elaborate records to be kept for the purpose of finding yarn realisation.

   b) Give detailed account for measurement and control of CV% of draw-frame sliver wrapping.

   c) Explain various means for increasing machine productivity at various preparatory machines in spinning department.

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

   a) Elaborate the method of establishing norms and collection and interpretation of data for exercising process control.

   b) Explain the method of controlling noil percentage and fractionating efficiency at comber.

   c) Describe causes and remedies of following package defects.

      i) Slubs

      ii) Crackers

      iii) Yarn hairiness.

———————