22461

23124

3 Hours / 70 Marks Seat No. | | | | | | | | |

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

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Assume suitable data, if necessary.

(4) Use of Non-programmable Electronic Pocket Calculator is permissible.

(5) 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) Draw flyer of speed frame and label the parts.

b) State two functions of false twister of the flyer.

c) State function of sliver stop motion on speed frame.

d) State two function of traveller.

e) Define traveller lag.

f) State two functions of balloon control rings on Ring frame.

g) Classify types of bobbin winding on Ring frame and state ratio of winding coil to binding coil.

Marks

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

a) Select process parameters to process 0.14 Ne Hank of sliver on speed frame.

b) Bobbin building is a major challange in speed frame. What is the function of cone drums and bobbin rail drive in achieving good build of bobbin ? Explain with sketch.

c) Explain importance and working of roving stop motion and blower on roving frame.

d) Explain with sketch different types of spindle drives stating one advantage of each. (Explain with help of sketch.)

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

a) Draw top arm drafting system and label the parts on speed frame.

b) Explain automatic transfer of roving bobbin to ring frame.

c) Calculate the time in minutes to exhaust 25 kg sliver on speed frame running at spindle speed of 950 rpm with TM of 1.28, hank of roving of 1.8 Ne at 85% efficiency.

d) Draw passage of material through ring frame and label the parts.

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

a) Explain any one differential mechanism used on speed frame with sketch.

b) State the effect of spinning triangle on yarn properties and working of ring frame ? Explain.

c) Classify and draw different types of Rings used on ring frame for cotton yarns.

d) Classify different types of travellers with sketch.

e) Select ring and traveller numbers to produce 20^s Ne cotton yarn and 100^s Ne cotton yarns.

Marks

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

a) Describe cop building mechanism with sketch and label the parts.

b) Describe classimate II faults with sketch.

c) Calculate the time in hours required to exhaust 2.2 Kg roving bobbin on ring frame working with 18500 rpm spindle speed, 4.2 TM, 54^s Ne count and 90% efficiency.

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

a) State features of modern ring frame and automations.

b) Select suitable changes on Ring frame to change count from 20^s Ne to 100^s Ne.

c) Explain the device used on ring frame to make compact yarn with sketch.
