THE TEXTILE ASSOCIATION (INDIA)
A.T.A.(REVISED) PART-III EXAMINATION – 2012
PAPER – A 3.OA2
MODERN YARN MANUFACTURE
MARKS : 100

Date: 25.12.2012 Time: 10 am to 1 pm

Instructions:
1. Attempt six questions out of which Q.1 is compulsory
2. Answer each next main question on new page
3. Figure to the right indicate full marks
4. Illustrate your answer with sketches and flow chart wherever necessary
5. Use of non programmable electronic pocket calculator permissible.
6. Mobile and any other communication devices are not allowed in exam hall.
7. Assume suitable data wherever necessary.

Q.1. Give reasons for the following (Any Five) (20)
   a. On ring frames the front roller can limit the maximum spindle speed.
   b. OE spinning permits very high production rates.
   c. Dref-3 is not an open end spinning system.
   d. Rotor yarns are more uniform than ring spun yarns.
   e. As compared to chute feed system at the card, lap feed gives more uniform sliver.
   f. Automatic Bale Openers give better opening and cleaning than Hopper Bale Opener.
   g. Rotor spun yarns have lower strength than ring spun yarns.

Q.2. a. Describe the basic principle of OE spinning and hence explain how they overcome (09)
      the limitations of Ring Spinning.
   b. Explain the principles of Self Twist Spinning, giving the important process features.

Q.3. a. Describe the construction and working of the Rotor Spinning Machine. (10)
   b. Compare the structure and properties of ring and rotor spun yarns.

Q.4. a. Describe the important developments in the card which have resulted in very (10)
      high production rates.
   b. Compare the modern cards with the conventional cards.

Q.5. Write notes on ANY TWO of the following. (16)
   a. Autolevellers – Types, applications and working.
   b. Air Jet Spinning.
   c. Chute feed systems – Working, advantages and disadvantages.

Q.6. a. Describe the important features of the modern Ring Frames. (11)
   b. Describe briefly the importance of combing lap preparation.

Q.7. a. Elaborate on the improvements in yarn properties by doubling. Describe the working (09)
      of the Two for One Twister.
   b. Describe the Twistless Yarn Manufacture.

Q.8. Write notes on ANY TWO of the following. (16)
   a. Modern Combers.
   b. Rotor deposits – Causes and remedies.
   c. Compact spinning.

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