THE TEXTILE ASSOCIATION (INDIA)
ATA (Revised) Part III, Examination 2016
Paper A3OA
Process Control in Yarn Manufacture

Date: 25.12.2016  Marks: 100  Time: 10.00 am to 1.00 pm

Instructions:
1. Answer any six questions out of which Question No 1 is compulsory.
2. Answer each next main question on a new page.
3. Figure to the right indicate full marks.
4. Illustrate your answers with sketches and flow chart wherever necessary.
5. Use of non-programmable electronic pocket calculator permitted.
6. Mobile and any other communication devices are not allowed in examination hall.
7. Assume suitable data wherever necessary.

Q1 State true or false, justify your answers by giving reasons. 20
   a. Yarn realization is affected by the moisture content in the cotton bales.
   b. HOK decreases with automation in spinning industry.
   c. The hank variation in draw frame sliver lead to cone weight variations as the count becomes light or heavy.
   d. Productivity index is the percentage of production achieved against the norms.
   e. Key variables in carding are the diameters of cylinder, doffer and lickerin.

Q2 a. What is spin ability of a cotton? Explain with examples. 16
   b. What are the variables in a carding machine contributing for higher nepes?

Q3 a. Explain with reason which is better to get less nepes; increasing noil% by 1% or reducing comber speed by 5%. 16
   b. What are the control points and check points in a comber?

Q4 a. Define HOK in Spinning. Give an example. 16
   b. What is 40s converted production? How do you convert your production into 40s?

Q5 a. Explain the factors contributing for count variation in yarns. 16
   b. Explain the factors in speed frame influencing irregularities of yarns.

Q6 a. What do you mean by Quality Audit? How it differs from Quality Control? 16
   b. What factors contribute for yarn strength variations in ring frames?

Q7 a. What are the control points and check points in cotton mixing? 16
   b. Explain the method of laying the cotton bales for mixing in bale plucking.

Q8 a. How do you assess the performance of a card? 16
   b. Prepare a checklist for auditing a carding machine.