THE TEXTILE ASSOCIATION (INDIA)
ATA (Revised) Part III, Examination 2017
Paper A30A
Process Control in Yarn Manufacture

Date 25 Dec 2017
Marks – 100
Time 10.00AM 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.
   a. Yarn realization is the percentage of yarn recovered from damaged cops.
   b. Productivity is the production achieved in 8 hours by a worker.
   c. Process Control is the active changing of the process based on the results of process monitoring.
   d. HOK is opposite of OHS.
   e. The best method to find the actual strength variation is to test 100% yarn.

Q2 a. What are the Key Variables in a Process? Explain their significance.
    b. What are the factors in a draw frame contributing for hank variations?

Q3 a. What are the key steps in implementing Statistical Process Control?
    b. What are the objectives of Process Control in a Textile Mill?

Q4 a. What are the various cost elements in producing a yarn? Which are the costs that need to be monitored in process control?
    b. What is spin ability of cotton? What are the parameters verified while selecting cotton for spinning Ne 60s for combed warp?

    b. What is 40s converted HOK? How it is calculated when the counts worked are Ne 60s and Ne 30s?

Q6 a. What do you mean by Machine Audit? How it differs from Quality Audits?
    b. What are the factors contributing for imperfections in ring frames?

Q7 a. What are the factors contributing for variation in tensile strength in yarns?
    b. Explain the factors in Speed frame influencing count variation of yarns.

Q8 a. What are the control points and check points in speed frames where a supervisor has to concentrate?
    b. What parameters are to be checked in winding for filament yarns?