THE TEXTILE ASSOCIATION (INDIA)
A.T.A. (REVISED) EXAMINATION – 2015
Part III – A 30A (OPTIONAL SUBJECT)

PROCESS CONTROL IN YARN MANUFACTURE

Date: 26.12.2015  Marks: 100  Time: 10 am to 1 pm

Instructions:
1. Attempt six questions out of which Q1 is compulsory
2. Answer each next question on 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 permissible
6. Mobile and any other communication devices are not allowed in exam hall.
7. Assume suitable data wherever necessary

Q1 a) Say true or false, Justify your answers by giving reasons.
   i. Yarn realization is the percent of yarn produced from given roving bobbins.
   ii. HOK increases as the work load of a tenter is increased.
   iii. The method followed to find the count variation is by 1 inch yarn weighing.
   iv. Productivity is the production achieved in 8 hours by a machine.
   v. Key variables in comber are the speed and nips per minute.

Q2 a. What is the significance of Key Variables in a Process?  
   b. What are the variables in a speed frame contributing for hank variations?

Q3 a. Explain with reason which is better; increasing yarn realization by 1% or increasing spinning production per spindle by 5%.
   b. Suppose you need 2000 Cotton bales for a mixing; in station A, 2000 bales are available but price is Rs. 800/- more per candy, whereas there are three stations B, C and D from different states with the same fibre parameters where availability of cotton is there at 1050, 790 and 760 bales respectively. What would you prefer?

   b. What is 40s Converted production?

Q5 a. Explain the factors contributing for tensile strength variation in yarns.
   b. Explain the factors in draw frame influencing count variation of yarns.

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 control points and check points? Give examples.
   b. Explain the method of conducting machine audit in Carding.
Q8  a. How do you assess the performance of Comber?
b. What parameters are to be checked in winding for filament yarns?