THE TEXTILE ASSOCIATION (INDIA)
A.T.A. PART III EXAMINATION 2019
Paper: A3OB
PROCESS CONTROL IN FABRIC MANUFACTURE

Date: 23.12.2019
Marks: 100
Time: 10.00 A.M. to 1.00 P.M.

Instructions:
1. Attempt any SIX Questions out of which Q.1 is compulsory
2. Answer each next main question on a new page
3. Figures to the right hand side indicates full marks
4. Illustrate your answers with sketches and flow charts wherever necessary
5. Use of non-programmable electronic pocket calculator permissible
6. Mobile and any other communication devices and books etc. are not allowed in exam hall
7. Assume suitable data wherever necessary

Q. 1: a) Fill in the blanks:

i) A damaged or rusty emery patti on loom causes ............... in fabric
ii) A defect ..................... is a weft loop protruding from the cloth surface.
iii) A ....................... coating on the cylinders in a sizing machine will reduce stickiness.
iv) A major cause of defects of ................. are at Sizing due to incorrect mending of ends at Warping.

b) State True or False:

i) The Picking Bands should be kept inside polyester bags and store in dry place.
ii) Drop Pins of stop motions should not have any grooves or cuts.
iii) Beams of small barrel diameter give high unwinding tension at sizing
iv) The positive let-off motion has a device to drive the beam and it is used for very light fabric quality.

c) Match the following:

i) Sunken Selvage  a) Winding
ii) PVA  b) Autoconer
iii) Splicing Unit  c) Weaving
iv) Traverse drum  d) Sizing Chemical

Q. 2: a) What is After Waxing? How it helps in improving sized yarn quality?

b) What are the factors for preparation of good Sized Beams?

Q. 3: a) Explain the major fabric defects and explain causes and remedies for at least any 3 major defects.

b) What are the factors for minimizing end breakages on sized beams?

Q. 4: a) Explain implement the process control in Loom Shed?

b) What are the major factors for quality package preparation in warp winding?
Q. 5:  
a) What steps will be taken to work Soft Beams (low size %) on looms.  
b) What parameters of Reed and Healds should be considered for process control on Loom?  

Q. 6:  
a) What are major factors of loss in Loom Efficiency and how to control?  
b) What are the factors of generating Hard Waste and control to minimize it on Warping and Sizing process?  

Q. 7:  
a) Calculate the production of winding machine per shift of 8 hrs. in kgs. for 30 spindles with 80% efficiency and 600 mpm speed for 40s count.  
b) What parameters of Reed should be considered for process control on looms?  

Q. 8:  
a) State the function of picking mechanism on plain overpick looms with sketch?  
b) What is the process control for end breakages in Warping Machine?