THE TEXTILE ASSOCIATION (INDIA)  
A.T.A. (REVISED) EXAMINATION – 2015  
Part III– (Optional )

MODERN FABRIC MANUFACTURE

Date: 27.12.2015  
Marks: 100  
Time: 10 am to 1 pm

Instructions:  
1. Attempt six questions out of which Q1 is compulsory.  
2. Answer each 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. Compare the performance of following yarn in air jet weaving machine. Assume that the yarns have same count.  
   I. Ring spun yarn  
   II. Open end yarn  
b. Differentiate between conventional weaving machines and modern shuttles weaving machines.  
c. Differentiate between Projectile and rapier weaving machine.  
d. Differentiate between Water jet and air jet weaving machines.

Q2  
Explain the manufacturing and identification of leno selvage along with classification and economic use with other selvages.

Q3  
Discuss basic principle of projectile weaving machine in detail.

Q4  
Discuss the principle of weft insertion and picking mechanism in air jet weaving machine.

Q5  
a. Discuss quality of air needed in air jet machine  
b. Describe timing diagram in air jet machine

Q6  
a. Discuss the sequence of weft insertion in water jet loom and timing diagram.  
b. Describe picking mechanism and nozzle pump design in water jet loom.

Q7  
Explain driving mechanism in flexible and rigid rapier.

Q8  
a. Describe various types of fabric defects and their remedies in detail.  