THE TEXTILE ASSOCIATION (INDIA)
A.T.A. (REVISED) EXAMINATION – 2015
Part II – A 2.4

PRINCIPLES OF TEXTILE TESTING & STATISTICS

Date: 27.12.2015  Marks: 100  Time: 2 pm to 5 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
   i. Random sampling is done when yarns are not uniform.
   ii. Single fibre weighing is done when we need accurate readings of fibre density.
   iii. Differential dyeing gives maturity reading faster and precise.
   iv. CRT instrument is used for Crimp Regularity Testing.
   v. Abrasion resistance of a fabric depends on the abrasion resistance of fibres.

Q2
a. Explain the terms Nominal Count, Actual Count and Average Count.

Q3
a. Explain the term twist factor and its relation to fibre diameter and length in spinning.
   b. Work out the twist factor if a yarn of Ne 40s has 1200 TPM.

Q4
a. What are the different methods of measuring fabric weight per unit area?
   b. If a fabric roll of 250 Metres is weighing 50Kgs, what is the weight per linear metre and GSM if the fabric width is 120 cm.

Q5
a. Explain different systems adapted for testing evenness of yarns.
   b. Explain the method of analysing a periodically repeating fault using Spectrogram.

Q6
a. Explain the method of assessing crimp contraction of textured yarns.
   b. Explain the terms Crimp Rigidity and Crimp Stability.

Q7
a. What is the purpose of assessing air permeability of a woven fabric?
   b. Explain the term Drape. Fabric stiffness and handle.

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Q8  
a. Explain the terms Tear Strength and CSP. What is the significance of CSP? 08
b. Explain the different Tear Strength testing methods.

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