THE TEXTILE ASSOCIATION (INDIA)
ATA Part II Examination 2018
Paper A2-4
Principles of Textile Testing and Statistics
Marks – 100
Date 25 Dec 2018 Time 2.00 PM to 5.00 PM

Instructions:
1. Answer any six questions out of which Question No1 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. Crimp is a special property of undrawn filament yarns.
   b. Blend composition is tested by using NaOH swelling test method.
   c. Fibre fineness is checked using Shirley Photoelectric Stapler.
   d. Fabric dimensions are affected by fibre fineness and count of warp and weft.
   e. Air permeability of a fabric is tested by using constant rate of traverse method.

Q2 a. Explain the method of testing crimp of warp yarn from a fabric.
    b. Workout the crimp of a weft yarn when the fabric width is 110 cm and the length of weft inserted per pick is 118 cm.

Q3 a. Explain the terms CRT, CRL and CRE.
    b. Explain the principle of testing used in Stelometer.

Q4 a. What are the different methods of measuring evenness of yarn?
    b. Explain the terms used in an Evenness tester while describing a yarn for its evenness.

Q5 a. Explain the term stiffness in a fabric and the need to understand it.
    b. What is crease recovery of a fabric? Explain the method of assessing the same.

Q6 a. Explain the term maturity of a cotton fibre and the method of assessing it.
    b. Explain the term micronaire of cotton and its relation with maturity.

Q7 a. What is the linear density of a fabric and how it is different from fabric GSM?
    b. A fabric roll of 180 cm width and 150 meters length weighs 36 Kgs, what is the density?

Q8 a. Explain the different tests conducted on POY yarns and their purposes.
    b. How testing of spun cotton yarns differs from testing POY yarns?