THE TEXTILE ASSOCIATION (INDIA)
ATA PART II, NEW 3 YEARS EXAMINATION - 2014
PAPER A2-4
PRINCIPLES OF TEXTILE TESTING AND STATISTICS
Date: 27.12.2014
MARKS: 100
Time 2.00 PM to 5.00 PM

Instructions:
1. Answer any six questions out of which Question No 1 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.
8. Questions 2 to 8 a & b carries equal marks of 08

Q1 State true or false, justify your answers by giving reasons. (20)
   a. The median is the most frequently appearing value in the population
   or sample.
   b. Hysteresis is the historical properties of a fibre leading to hysteria.
   c. Tubular cloth inspection machine is provided with side mirror to help
   inspector in identifying objectionable fabric damages.
   d. Fabric density is explained in terms of ends and picks.
   e. Untwist – Retwist method is normally used to measure the TPM of
   double yarns

Q2 a. Explain the areas of application of statistics in Textile and Apparel
   Industry. (16)
   b. Explain the term “Bias” in sampling, testing and reporting of a test
   result.

Q3 a. Explain the term standard deviation and its significance in measuring
   variation. (16)
   b. What is “Student – ‘t’ test”? Where it is used in Textile industry?

Q4 a. How the moisture influences the test results of cotton yarn? (16)
   b. Explain the terms ‘Moisture Content’ and ‘Moisture Regain’.

Q5 a. Explain the Gravimetric method of measuring the denier of a filament. (16)
   b. Explain the term fineness and micronaire values.

Q6 a. Explain the terms Breaking Load, Force at Rupture and Force and
   Specified Elongation. (16)
   b. Explain the method of measuring Single thread strength of cotton
   yarn.

Q7 a. Explain wickability test for textured filament yarns. (16)
   b. Explain hot air shrinking test for filament yarns?

Q8 a. Explain the terms Air Permeability, Air Resistance and Air Porosity
   (16)
   b. Explain the method of assessing fabric stiffness using Heart Loop
   method.