THE TEXTILE ASSOCIATION (INDIA)
ATA (Revised) Part II Examination 2016
Paper A2-4
Principles of Textile Testing and Statistics

Date 26.12.2016 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.

Q1 State true or false, justify your answers by giving reasons.
   a. Crimp is a special property of twisted multifilament yarns.
   b. Blend composition is tested by using burning test method.
   c. Fibre fineness is checked using gravimetric method.
   d. Fabric dimensions are affected by ends and picks per inch.
   e. Lea strength of a yarn is tested by using constant rate of traverse method.

Q2 a. Explain the method of testing count of warp yarn from a fabric.
    b. Workout the resultant count of a cabled yarn made by combining 2 yarns of Ne 40s in first fold and making 3 fold of the same in final.

Q3 a. Explain the terms Mean, Mode and Median in statistics.
    b. Explain the terms Standard Deviation and Coefficient of Variation and their use.

Q4 a. What are the different methods of measuring crimp of yarn in a fabric?
    b. When a weft yarn was unravelled from a 100 cm wide fabric, it measured 110 cm. What is the crimp percent?

Q5 a. Explain the term cover factor in a fabric and the need to understand it.
    b. If a fabric is woven with Ne 20s in warp and Ne 20s in weft and has 52 ends per inch and 48 ends per inch, what is the expected cover factor?

Q6 a. Explain the term abrasion resistance and the method of assessing it in a fabric.
    b. Explain the term pilling of fabric. How it is measured?

Q7 a. What is density of a woven fabric and how it is determined?
    b. If a fabric roll of 150 cm width and 120 meters length weighs 36 Kg, what is the density?

Q8 a. Explain the different tests conducted on POY yarns and their purposes.
    b. What tests are normally conducted for textured yarns? How it differs from testing POY yarns.