THE TEXTILE ASSOCIATION (INDIA)
A.T.A.(REVISED) PART-I EXAMINATION – 2012
PAPER – A 1.4
ELEMENTS OF TEXTILE TECHNOLOGY
MARKS : 100

Date: 25.12.2012
Time: 10 am to 1 pm

Instructions:
1. Attempt six questions out of which Q. 1 is compulsory
2. Answer each next main question on new page
3. Figure to the right indicate full marks
4. Illustrate your answer 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.

Q 1.  a. State True or False
   i) Draw frame is the heart of spinning.
   ii) Denier is direct yarn numbering system.
   iii) Shedding is a secondary motion of loom.
   iv) A plain weave fabric can be woven with a set of two heald shafts.
   v) After sizing abrasion resistance of yarn is decreases.

b. Fill in the blanks.
   i) Cross section of cotton fibre is ______ in shape.
   ii) Strength of cotton fibre is ______ than polyester fibre.
   iii) Knitted fabrics have ______ stretch ability than woven fabrics.
   iv) ______ dye is mostly use for polyester dyeing.
   v) Fibre to fibre separation is done by ______ machine.
   vi) Wet strength of viscose fibre is ______ than dry strength.

c. Write short notes on following (any three)
   i) Carding
   ii) Plain weave
   iii) Sizing
   iv) Texturising

Q 2. Explain objective of following in brief.
   i) Ginning
   ii) Mixing
   iii) Blow room
   iv) Comber
Q.3. a. Explain fibre classification by neat chart
   b. Explain following with examples
      i) Melt Spinning
      ii) Solution spinning

Q.4. a. Explain primary and secondary motions of loom in details
   b. Calculate the resultant count of cotton yarn composed of 24" (Ne) & 30" (Ne)
   c. Which are the thermoplastic & non thermoplastic fibres?

Q.5. a. What is the object of the doubling and end uses of doubled yarn?
   b. Explain yarn numbering with examples.
   c. Convert the following
      i) 70 Denier to Tex
      ii) 30" (Ne) to Metric count
      iii) 10 Tex to English count

Q.6. a. Explain objectives of following processes
      i) Singing    ii) Desizing
      iii) Scouring  iv) Bleaching
   b. Draw Desing, Draft & Peg Plan of Plain weave

Q.7. a. Explain in detail the following dyes.
      i) Direct dye    ii) Vat dye
      iii) Disperse dye  iv) Reactive dye
   b. Explain the process flow chart of carded and combed yarn.

Q.8. a. What are the objects of winding & warping process?
   b. Define & explain the importance of following physical properties of fibre.
      i) Fibre length
      ii) Fibre fineness
      iii) Fibre strength
      v) Fibre maturity

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