THE TEXTILE ASSOCIATION (INDIA)
A.T.A. PART – I (R) EXAMINATION -2016
PAPER-IV (A1.4)
ELEMENTS OF TEXTILE TECHNOLOGY

Date: 26.12.2016
Marks: 100
Time: 10 am to 1.00 pm

Instructions:
1. Attempt any six questions out of which Q.1 is compulsory
2. Answer each next main question on new page.
3. Figure to the right indicates full marks.
4. Illustrate your answer with sketches and flow chart wherever necessary.
5. Use of non programmable electronics pocket calculator permissible.
6. Mobile and other communication devices are not allowed in exam hall.
7. Assume suitable data wherever necessary.

Q.1. a) Fill in the blanks.
   i) Fibre to fibre separation is done by _______ machine.
   ii) Fibre micronaire is measured in _______ unit.
   iii) Combed yarn is more _______ than carded yarn.
   iv) Polyester filament yarn is _______ uniform than cotton yarn.
   v) After sizing strength of yarn is _______.
   vi) Wet strength of cotton yarn is _______ than dry strength.

b) Say True or False
   i) Polyester fibre is regenerated fibre.
   ii) Metric count is indirect yarn numbering system.
   iii) Shedding is a primary motion of loom.
   iv) Vat dye is mostly used for cotton.
   v) Polyester fibre is manufactured by melt spinning.

c) Write short notes on following (any three)
   i) Melt spinning
   ii) Desizing
   iii) Picking
   iv) Yarn CSP

Q.2. a) Explain yarn numbering system with examples

b) Explain Objective of following in brief. (Any Two)
   i) Blow-room   iii) Comber
   iii) Ring frame
Q.3. a) Explain the process flow chart of carded and combed yarn.

b) Explain fibre classification by neat chart.

Q.4. a) Explain the following fibre properties. (Any two)
   i) Viscose
   ii) Polyester
   iii) Cotton

b) Write short notes (Any Two)
   i) Card wires
   ii) Speed frame
   iii) Ginning

Q.5. a) Explain primary and secondary motions of loom in details

b) Convert the following (Any two)
   i) 100 Denier to Tex
   ii) 20 \(^{2}\) Metric count to English count (Ne)
   iii) 20 Tex to English count

Q.6. a) Write short notes (Any three)
   i) Winding
   ii) Warping
   iii) Sizing
   iv) Yarn faults

b) Draw Design, Draft & Peg Plan of Plain weave.

Q.7. a) Explain the process flow chart of wet processing for cotton fabric.

b) Explain objectives of following processes (Any two)
   i) Singeing
   ii) Scouring
   iii) Bleaching

Q.8. a) Explain in detail the following dyes.
   i) Direct dye
   ii) Vat dye
   iii) Disperse dye
   iv) Reactive dye

b) Explain weaving process flow chart

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