Date: 26.12.2013  
M A R K S  : 100  
Time: 10 am to 1 pm

THE TEXTILE ASSOCIATION (INDIA)  
A.T.A.(REVISED) PART-I EXAMINATION – 2013  
PAPER – A 1.4  
ELEMENTS OF TEXTILE TECHNOLOGY

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. Fill in the blanks.  
   i. Cotton fibre is _________ fibre.  
   ii. Strength of cotton fibre is measured in _______ unit.  
   iii. Knitted fabrics have ________ stretch ability than woven fabrics.  
   iv. _______ dye is mostly used for polyester dyeing.  
   v. Fibre to fibre separation is done by ______ machine.  
   vi. Wet strength of cotton fibre is _______ than dry strength.  

   (06)

b. Say True or False  
   i. Carding is the heart of spinning.  
   ii. Metric count is direct yarn numbering system.  
   iii. Take-up is a secondary motion of loom.  
   iv. Wool fibre is regenerated type of fibre.  
   v. Polyester is the synthetic fibre.  

   (05)

c. Write short notes on following (any three)  
   i. Winding  
   ii. Twill weaves  
   iii. Dyeing  
   iv. Texturising  

   (09)

Q.2. Explain objective of following in brief. (Any four)  
   i. Draw frame  
   ii. Doubling  
   iii. Comber preparatory  
   iv. Comber  
   v. Speed frame  

   (16)

Q.3. a. Explain fibre classification by neat chart  

   (08)

b. Explain following with examples  
   i. Bleaching  
   ii. Ring spinning  

   (08)

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Q.4. a. Explain primary and secondary motions of loom in details
b. What are the objects of sizing?
c. Give the list of natural fibres?

Q.5. a. Explain the process flow chart of wet processing for cotton fabric.
b. Explain yarn numbering system with examples.

Q.6. a. Explain objectives of following processes
   i. Singeing  iii. Scouring
   ii. Design   iv. Bleaching
b. Draw Design, Draft & Peg Plan of Plain weave
c. Convert the following (Any two)
   i.  80 Denier to Tex
   ii. 60 Metric count to English count (Ne)
   iv. 10 Tex to English count

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

Q.8. a. What are the objects of pirn winding & warping process?
b. Explain the end uses of following products. (Any two)
   i. Woven fabric  ii. Knitted fabric
   iii. Non-woven fabric

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