THE TEXTILE ASSOCIATION (INDIA)
A.T.A (REVISED) PART –II NEW 3 YEARS EXAMINATION-2014
PAPER-A 2.3
PRINCIPLES OF TEXTILE WET PROCESSING

Date: 26.12.2014                      Marks: 100                      Time: 2.00pm to 5.00 pm

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

Q.1 Attempt any ten of the following:  
   i. Why are acid dyes so called?  
   ii. What are the objectives of scouring?  
   iii. Define % exhaustion with a suitable example.  
   iv. What is the purpose of bleaching?  
   v. What is the difference between dyeing and printing?  
   vi. What is the difference between dyes and pigments?  
   vii. Explain the term "Finishing of Textiles"  
   viii. What is resist dyeing?  
   ix. What is discharge printing?  
   x. What is the difference between durable and nondurable finish  
   xi. What is mercerization?  
   xii. Explain material to liquor ratio (MLR).  
   xiii. What are the objectives of desizing?  
  xiv. What is singeing?  
   xv. What is the difference between carrier dyeing and HTHP dyeing of polyester textile?

Q.2 Attempt any two.
   a. Give the classification of dyes according to dyeing methods.  
   b. Explain the dyeing method of cotton textiles using direct dyes  
   c. Discuss the mechanism of dyeing of cotton using reactive dyes and direct dyes.

Q.3 Attempt any two.
   a. Write a detailed note on the different methods of desizing of textiles. Describe the advantages and limitations of the preferred method of desizing.
b. Describe the working principle of jet dyeing machine and winch dyeing machine with a neat labeled diagram. (08)
c. Write a note on different types of steam agers used for fixation of prints. (08)

Q.4 Attempt any two.
a. Explain with a neat diagram HT HP dyeing of polyester using disperse dyes. (08)

b. What are the different types of carriers used in polyester dyeing? Explain the merits and demerits of carrier dyeing and HTHP dyeing (08)
c. Discuss the thermo-fixation of disperse colour in polyester coloration (08)

Q.5 Attempt any two.
a. Explain the principle of bleaching of cotton. Differentiate the process of bleaching of silk using Hydrogen peroxide and reducing agents. (08)
b. Discuss the scouring processes of cotton textiles (08)
c. Write a note on Blueing and optical whitening agents (08)

Q.6 Attempt any two.
a. Explain the technique of transfer printing with a neat diagram (08)
b. Explain the screen printing on cotton fabric using direct dyes (08)
c. Discuss the role of various ingredients in discharge style printing (08)

Q.7 Attempt any two.
a. Explain water repellent finishing of cotton textiles (08)
b. Explain flame retardant finishing of textiles (08)
c. Discuss the role of heat setting in polyester/cotton blended fabrics (08)

Q.8 Attempt any two.
a. Explain the fabric defects namely weft bar and Warp streaks. Give possible reasons for their occurrence. (08)
b. Describe Jigger, Winch, Mangle and beam dyeing machines with reference to their use in dyeing. (08)
c. Explain dyeing of silk using acid dyes. (08)