THE TEXTILE ASSOCIATION (INDIA)
A.T.A. (REVISED) PART-II EXAMINATION – 2012
PAPER – A 2.3
PRINCIPLES OF TEXTILE WET PROCESSING
MARKS : 100

Date: 24.12.2012

Time: 2 pm to 5 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. Attempt any Ten. (20)
   a. What is acid steeping?
   b. Give the dyeing temperature of different class of vat dyes.
   c. What are Ice colours?
   d. Define % Exhaustion with one example.
   e. Why are direct dyes so called?
   f. What are the objectives of Scouring.
   g. What are the ingredients of \( \text{H}_2\text{O}_2 \) bleaching.
   h. Write a note on the different styles of printing.
   i. Give the sequence of processing cotton.
   j. What are optical brightening agents.
   k. What are the objectives of Desizing.
   l. What is singeing?
   m. What is the effect of material to liquor ratio on dyeing.
   n. Give the purpose of scouring of polyester.
   o. Explain the term “Finishing of textiles”.

Q.2. Attempt any Two. (05)
   a. What is mercerization? With a neat diagram, explain the procedure of chainless mercerization?
   b. Give the classification of Acid dyes? Compare the conditions and also write the procedure of dyeing silk with super-milling acid dyes.
   c. Draw a neat labeled diagram of Jigger dyeing machine and Beam dyeing machine, Write the working principle of both the machines.
Q.3. Attempt any Two.
   
a. With a neat labeled diagram, explain the principle and working of stenter machine also
give its advantages. (08)
b. Give a detail procedure of bleaching cotton using H₂O₂ bleaching by using J box. (08)
c. What are the ingredients of a printing paste? Write the function of each. (08)

Q.4. Attempt any Two.
   
a. What are the different types of Agers used for fixation of prints? Explain any one with
the help of neat diagram. (08)
b. Give the Printing procedure of vat dyes and pigments. (08)
c. Write a note on the classification of print paste used for printing of textiles. (08)

Q.5. Attempt any Two.
   
a. Give the classification of dyes according to dyeing methods? (08)
b. Give the classification and general dyeing procedure of cotton using direct dyes. Also
write a note on the after treatments. (08)
c. Give the sub-classification of reactive dyes? Give the dyeing procedure using vinyl
sulphone reactive dyes? (08)

Q.6. Attempt any Two.
   
a. Write a note on the different bleaching agents used for bleaching of textiles. (08)
b. Give the general dyeing procedure of cotton using Indigo dyes. What are the
advantages & limitations of Indigo dyes? (08)
c. What are the stages involved in the application of azoic colors? Give the methods &
procedure of preparation of bases. (08)

Q.7. Attempt any Two.
   
a. With the help of a neat diagram, explain the working principle of flat bed printing
machine? Also mention its advantages. (08)
b. Give the general dyeing procedure of acrylic using cationic dyes and nylon using acid
dyes. (08)
c. Give the ingredients of print paste and mention the function of each. (08)

Q.8. Attempt any Two.
   
a. Draw a neat labeled diagram of plate singeing machine. Write the procedure and also
give its advantages & limitations (08)
b. Give a detail procedure of bleaching cotton using NaOCl. Also compare with H₂O₂
bleaching. (08)
c. Write the detailed procedure of dyeing cotton using basic dyes. Also, compare the
dyeing conditions with basic dyes on wool. (08)

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