THE TEXTILE ASSOCIATION (INDIA)  
A.T.A. (REVISED) PART-III EXAMINATION – 2012  
PAPER – A 3.OC1  
WET PROCESSING-I PRE TREATMENT & DYEING  
MARKS : 100  

Date: 24.12.2012  
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.  
Answer in brief:  

a. What is Singeing? Why singeing is necessary?  
b. In scouring of cotton write- name of chemical used, temperature and time  
c. Write the names of different bleaching agents used for bleaching.  
d. Define: (i) % shade (ii) MLR  
e. Which chemical is used for white colour?  
f. Match the following:  
   1. Polyster  a. Vat  
   2. Silk b. Basic  
   3. Cotton c. Disperse  
   4. Acrylic d. Metal complex  
g. Draw neat and labeled diagram of Jigger dyeing machine.  
h. Fill in the blanks:  
   1. In dyeing of P/C blended fabric ------- is dyed first & ------- is dyed after.  
   2. In azoic dyeing two chemicals used are ------- & -------.  
   3. What is function of nozzle in jet machine?  

Q.2.  

a. Write the importance of inspection of grey fabric. Which faults are common?  

b. Explain Gas singeing method with simple diagram.  

c. Write enzymatic desizing process.  

What is test to check that size is removed from the fabric?  

Q.3.  

a. Write the process to remove black stains and Fungus stains in fabric.  

b. Explain scouring process in kier.  

c. What is the change in the grey cotton material after scouring?  

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Q.4. a. Explain bleaching of cotton with bleaching powder or chemick. 
   b. Write the process of bleaching of polyester with sodium chlorite. 
   c. Describe continuous scouring and bleaching process in J box or C.B.R. 
   (04) (04) (08)

   b. Write the names of reducing agents used for bleaching of wool. 
   c. Write the process of dyeing white colour on cotton. 
   Why fabric looks more white after dyeing? 
   (06) (04) (06)

Q.6. a. Solve the following example- 
   Given- weight of cloth = 150 kgs 
   MLR = 1 : 6 
   Depth of shade = 2 % 
   Glauber’s salt = 60 gpl 
   Calculate- 
       (i) Total liquor required for dyeing 
       (ii) Weight of dye to take for dyeing 
       (iii) Weight of salt 
   b. Explain dyeing of cotton with reactive dye. 
   c. Explain dyeing of wool with chrome dyes OR metal-complex dyes. 
   (06) (04)

Q.7. a. How is cotton dyed with Aniline Black? 
   b. Explain dyeing of polyester with disperse dyes by any one method. 
   c. How is insoluble vat dye converted to soluble vat dye? 
   (06) (06) (04)

Q.8. a. Give reasons- 
   1. Wash fastness of direct dye improved with dye fixing agent. 
   2. Reduction clearing is necessary after polyester dyeing. 
   b. Explain the method to check Rubbing fastness of dyed material. 
   c. Say true or false: 
      1. Acid desizing damages cotton fabric. 
      2. Vat dye has poor wash fastness. 
      3. Iron and Chromium oxides are used to dye mineral khaki. 
      4. Stabilizer is not necessary in peroxide bleaching. 
   (06) (04)