THE TEXTILE ASSOCIATION [INDIA]
G.M.T.A. (REVISED) EXAMINATION – 2016
SECTION - B  PAPER – B.3
TEXTILE WET PROCESSING
Marks - 100

Date: 25/12/2016  Time: 02.00 pm to 05.00 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 nonprogrammable electronic pocket calculator permissible
6. Mobile and any communication devices are not allowed in exam hall
7. Assume suitable data wherever necessary

Q.1 Answer in short (any ten)

a. Choose the correct option in following-
   I) The MLR in kier is usually
      i) 1 : 10 ii) 1 : 20 iii) 1 : 40 iv) 1 : 5.
   II) _________ process requires chemicals;
      i) singeing ii) drying iii) scouring iv) calendaring

b. Fill in the blanks in following-
   I) ________ machine used to give anti-shrinkage treatment.
   II) Batik printing is ________ style of printing.

c. What is Heat setting? To which fabric heat setting is necessary?

d. Write the types of water insoluble dyes.

e. State if following statements are True or False. If false write correct statement.
   I) Reactive dye forms a covalent bond with the fibre.
   II) Acid desizing is safe process for cotton.

f. Draw simple diagram of squeegee used for flat bed screen printing.

g. Why is bleaching of textiles necessary?

h. Match the following:
   Group I) – i. Urea ii. Sodium silicate iii. Starch iv. DPT
   Group II) – a. stabilizer b. leveling c. hygroscopic d. thickener

i. Give reason: Aniline Black is called oxidation colour.

j. What is difference in jigger and winch machine?

k. Explain slitting process in processing of knitted fabrics.

l. Explain importance of dark room in screen preparation for printing.

Q.2 Answer the following-

a. With a suitable diagram describe Shearing process.  6

b. Write the objects of scouring. Also explain scouring process for cotton.  6

c. Write down types of dyes used for following fibres- cotton, polyester, silk  4
Q.3 Answer the following-
   a. Discuss roller singeing method. Give disadvantages of roller singeing method. 5
   b. Explain process of bleaching with Sodium hypochlorite or Bleaching powder. 6
   c. Which main chemicals are used to prepare printing paste? 5

Q.4 Answer the following-
   a. What is use of caustic soda and stabilizer in \( \text{H}_2\text{O}_2 \) bleaching? 4
   b. Write down different types of mercerization machines for fabric. Describe working of any one machine. 8
   c. What is resin finish? Give the names of resins used for finishing. 4

Q.5 Answer the following-
   a. Write a note on Block printing. 4
   b. Explain the process of scouring of knitted fabrics. 6
   c. Explain in detail dyeing of cotton with reactive dyes. 6

Q.6 Answer the following-
   a. Describe Gas singeing method. 6
   b. Explain degumming of silk. 4
   c. Explain following methods for printed fabrics;
      1) Steaming 2) Curing 6

Q.7 Answer the following-
   a. Explain the use of following chemicals-
      1. Glauber’s salt in dyeing with direct dye;
      2. Carrier in polyester dyeing;
      3. Rongalite C in discharge printing;
      4. Oxalic acid in sodium chlorite bleaching 6
   b. Explain any one of following process-
      1) Slack mercerization 2) Yarn mercerization 4
   c. Discuss calendaring finishing with suitable diagram. 6

Q.8 Write notes on any four- (4 marks each) 16
   a. Enzymatic desizing
   b. Tie and Dye printing
   c. Water repellent finish
   d. Pigment printing
   e. Rubbing fastness test for dyed material
   f. Barium Activity Number
   g. Advantages of rotary screen printing
   h. Soft finish