THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2015
SECTION – D PAPER

WET PROCESSING-DYEING

Date: 25.12.2015 Marks: 100 Time: 2 pm to 5 pm

Instructions: 1. Attempt six questions out of which Q1 is compulsory
2. Answer each next question on new page
3. Figure to the right indicate full marks
4. Illustrate your answers 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

Q1 Match the following questions by choosing correct option(compulsory) 20 Marks
1. Which of the following chemical is commonly used for dyeing exhaust agent
   a) Sodium Sulphate b) Sodium Perborate
   c) Calcium Chloride d) Potassium Permanganate

2. Hot brand and Cold brand are type of
   a) Acid dyes b) Basic dyes c) Reactive dyes d) Metal-complex dyes

3. Polyester fibres can be dyed using
   a) Disperse dyes b) Direct dyes c) Vat dyes d) Reactive dyes

4. Best pH for bleaching with Hydrogen Peroxide is
   a) 4 b) 6 c) 7 d) 9

5. Temperature usually adopted for dyeing Polyester by HTHP method is
   a) 130°C b) 200°C c) 90°C d) 100°C

6. The machine that works on the principle of both fabric and liquor moving during the dyeing operation is
   a) Jigger b) Jet dyeing machine
   c) Beam dyeing machine d) Padding mangle

7. Indigo is a
   a) Vat dye b) Reactive dye
   c) Acid dye d) Basic dye

8. Material to liquor ratio (MLR) in a Jigger dyeing machine is
   a) 1.40 b) 1.20 c) 1.10 d) 1.4

9. Basic dyes are
   a) Neutral b) Nonreactive c) Anionic d) Cationic
10. Knitted fabrics are processed on
   a) Jigger machine b) Soft-flow machine c) Kier boiler d) HTHP dyeing machine

Q2. What is scouring process? Explain the method of scouring cotton materials.

Q3. Define bleaching. What are the objectives of bleaching process? Describe the bleaching process using hydrogen peroxide.

Q4. What are OBA's and describe how they function? Provide a recipe for application of OBA on cotton fabrics.

Q5. What is the relation between time, temperature and liquor ratio during the dyeing process? Explain their effect on dye exhaustion and colour fastness properties.


Q7. With a diagram explain the working mechanism of winch dyeing machine.

Q8. What is the role of carrier during polyester dyeing? Explain the HTHP dyeing process of polyester fabric and list out its advantages over carrier dyeing process.