THE TEXTILE ASSOCIATION [INDIA]
G.M.T.A. (REVISED) EXAMINATION – 2017

SECTION - B PAPER – B.3

TEXTILE WET PROCESSING

Date:25/12/2015 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 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 A) Fill in the blanks-
1) -------------- is the universal bleaching agent.
2) Reactive dye forms -------------- bond with fibres.
3) 'Tie and Dye' is -------------- style of printing.
4) The last finishing process before delivery to folding is --------------.

B) Write the proper test in group II for process in group I-
Options are given in bracket below,
(BAN, Fastness, Pilling-rating, TEGEWA, Bending Length, Absorbency, CRA, Shrinkage)

<table>
<thead>
<tr>
<th>Gr. I: Process</th>
<th>Desizing</th>
<th>Stiff Finish</th>
<th>Dyeing</th>
<th>Mercerizing</th>
<th>Shearing</th>
<th>Resin finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gr. II: Test</td>
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C) Write short answers-
1) What is use of wetting agent in desizing process?
2) Explain the meaning of Metal–Complex dyes.
3) Draw a simple diagram of squeegee used in flat-bed screen printing machine.
4) Give the names of any two calendaring machines.

D) Define the following terms-
a) Degumming of silk b) Mineral colours c) Thickener d) Temporary finish

E) Write TRUE or FALSE for following statements-
Also write Correct statement for false one.
1) In singeing process protruding fibres are cut with cutters.
2) Curing of printed fabric is done with dry heat.
3) Viscose fibre fabrics require delustering process.
4) Disperse dyes are applied in alkaline pH.

Q.2 Answer the following (Any Two)
   a) Explain process of dyeing cotton with Vat dyes.  
   b) Describe in detail Enzymatic Desizing process with reactions.  
   c) Discuss Anti-Crease finish.

Q.3 Answer the following (Any Two)
   a) What is Water-Repellent finish? Which fabrics require Water-Repellent finish?  
   b) Explain principle and process of 'Transfer printing'.  
   c) Describe Hot-Mercerization process.

Q.4 Answer the following (Any Two)
   a) Discuss Bleaching with Hydrogen Peroxide. Give chemicals used and their functions.  
   b) Explain: i) Carbonization of Wool ii) Milling of Wool  
   c) Give detail classification of dyes based on their application.

Q.5 Answer the following (Any Two)
   a) Describe i) Direct ii) Discharge and iii) Resist Styles of printing.  
   b) Explain with examples i) Temporary ii) Semi-Permanent and iii) Permanent finish.  
   c) With reasons explain at least four precautions taken in Gas-Singeing process.

Q.6 Answer the following (Any Four)
   a) Effect of i) MLR ii) pH of dye-bath on dyeing  
   b) Difference between Flame-Retardant and Flame-Proof finish  
   c) Difference between Sodium Hypochlorite and Sodium Chlorite bleaching  
   d) Difference between Roller and Rotary screen printing  
   e) Difference between Hydrolytic desizing and Oxidative desizing

Q.7 Write detail notes on following (Any Two)
   a) Dyeing with Direct dyes  
   b) Reductive bleaching of wool  
   c) Zero-Zero Shrinking Process

Q.8 Answer the following (Any Two)
   a) Explain processing of Knitted fabrics-
i) Precautions to be taken during processing
ii) Machines used for pretreatment, dyeing, drying etc;
iii) Process sequence for Tubular and Open knitted fabrics

b) Discuss Thermosol dyeing of polyester fabrics

c) Explain Heat-Setting of polyester fabrics