THE TEXTILE ASSOCIATION [INDIA]
G.M.T.A. (REVISED) EXAMINATION 2019
SECTION - B  PAPER - B.3
TEXTILE WET PROCESSING
Marks - 100

Date: 23.12.2019  Time: 2:00 p.m. to 5:00 p.m.

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 the following (Any Ten).20

a) Match the items given in Part I with the items given in Part II:

<table>
<thead>
<tr>
<th></th>
<th>Amylase</th>
<th>DFT</th>
<th>Guar gum</th>
<th>DMDHEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Printing</td>
<td>Finishing</td>
<td>Desizing</td>
<td>Dyeing</td>
</tr>
</tbody>
</table>

b) Write the answers in one sentence-
1) State any four types of Calendaring machine.
2) What is reductive bleaching of wool?

c) Write TRUE or FALSE for following statements-
1) The purpose of souring process is to neutralize alkali in fabric.
2) The purpose of steaming after printing is to remove the colour at printed area.
3) Jigger machine is suitable for processing of knitted goods.
4) Sulphur dyes are applied in alkaline pH.

d) Fill in the blanks using proper word from bracket:(Steaming, Vat, Curing, Reactive)
1) Vinyl sulphone dyes are ______ type of dyes.
2) In pigment printing; pigment fixation is done by ______.

e) Explain the meaning of the following i) Oxidative Bleaching ii) Batik printing

f) Choose the correct option from given-
1) Machine used to give anti-shrink treatment is ______. (a. sanforising b. resin finishing)
2) Non-chlorine base bleaching agent is ______. (a. hydrogen peroxide b. chemic)

g) What is the object of Overfeed in stenter machine?

h) Give the difference between dyeing and printing. (Minimum two points each)

i) What are 1:1 metal complex dyes and 1:2 metal complex dyes?
j) From the given diagram identify the process -

<table>
<thead>
<tr>
<th>Process</th>
<th>Before</th>
<th>After</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
</table>

k) What care must be taken in acid desizing?

l) Write proper word at empty place in following:
   1) Vat dyeing needs Hydros; Similarly; Pigment printing needs ------.
   2) Scouring gives Absorbency; Similarly; Sanforising gives ------.

Q.2 Answer the following:
   a) In scouring of cotton, write the chemicals used and their functions. 6
   b) I) Give the names of different methods of printing.
      II) Give the function of thickener and wetting agent in printing paste. 4
   c) Describe Shearing process for Textiles with suitable diagram. 6

Q. 3 Answer the following (Any Two)
   a) Write information for Sodium chlorite, Sodium hypochlorite and Hydrogen peroxide
   b) Explain PROCESS of Enzymetic desizing in detail. (Recipe, Conditions, Merits & demerits) 8
   c) Describe PROCESS of dyeing with Direct dyes. (Recipe, Conditions, Merits & demerits) 8

Q. 4 Answer the following (Any Two)
   a) Describe method for checking of washing fastness. 8
   b) Explain the meaning of following finishing processes in detail –
      i) Water-proof & Water-repellant finish ii) Durable-press & Crease-resistant finish 8
   c) Describe chainless-padless mercerization process. 8

Q. 5 Answer the following (Any Two)
   a) Describe in detail the PROCESS of Continuous Singeing and Desizing with diagram. 8
   b) Explain meaning of degumming of silk. Explain different methods of degumming. 8
   c) Explain the process shown in diagram. 8

Q. 6 Answer the following (Any Two)
   a) Write short notes on any two of following – 8
      1) Anti-microbial finish 2) Continuous Bleaching Range 3) HTHP dyeing of polyester
   b) Explain any two of following – 8
      1) Tests for absorbency of textiles 2) Soft flow m/c 3) Continuous washing range
c) Which dyes are used for dyeing wool? Explain any one method of dyeing of wool. 8

Q. 7 Answer the following -
   a) Explain the meaning of- 1) Slack mercerization 2) Cold mercerization 4
   b) Explain different types of Softeners in detail. 8
   c) Explain fastness properties of given dyes: i) Direct ii) Reactive iii) Vat iv) Disperse 4

Q. 8 Answer the following (Any Two)
   a) Discuss Rotary screen printing method with suitable diagram. 8
   b) Explain the process of dyeing Polyester – Cotton blended fabric. 8
   c) Explain with Reason; the use of following auxiliaries in textile processing - 8
      1) Wax 2) Sequesterent 3) PE Emulsion 4) Peroxide scavenger 5) Exhausting agent