THE TEXTILE ASSOCIATION (INDIA)
GMTA (REVISED) EXAMINATION – 2016
SECTION: D PAPER – SOD. 1
SILK REELING & THROWING TECHNOLOGY

Date: 29.12.2016 Marks: 100 Time: 02.00 pm to 05.00 pm

Instructions:
1. Attempt any Six questions out of which Q.1 is Compulsory
2. Answer each next question on new page
3. Figures to the right indicate full marks
4. Illustrate your answers with neat sketches & flow charts wherever necessary
5. Use of non-programmable electronic pocket calculator is permissible
6. Mobile and any other communication devices are not allowed in the Examination hall
7. Wherever necessary, Assume the standard values for constants for calculations

Q.1

i. Fill in the blanks
a. The pupae inside the cocoons can be killed using ___________ and __________ medium.
b. Silk fibre mainly contains ___________ and ____________
c. ___________ and ____________ are to be maintained during cocoon spinning.
d. Hardness of reeling water shall be in the range of ____________.
e. ___________ & ____________ types of twist cab be inserted in silk twisting machine.

ii. Write True or False
a. The reeling machine used for producing superior quality silk is cottage basin ( ).
b. Defective cocoons are used for the production of Dupion Silk ( ).
c. In silk twisting industry, UP twisters are used for efficient twisting ( ).
d. Permeation of reels before re-reeling will reduce breakages and gum spots in silk ( ).
e. Doubling eliminates yarn imperfections ( ).
f. Hard water is suitable for cooking of cocoons ( ).
g. Denier detector is available in automatic reeling machine ( ).
h. Crepe Yarn is low twist yarn ( ).
i. Renditta is the measure of the quality of raw silk ( ).
j. Floss is a type of silk waste generated in reeling process ( ).
iii. Match the following:  

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complicated design</td>
<td>Croisure</td>
<td>Crepe yarn</td>
<td>Tachometer</td>
<td>Porcelain buttons</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Speed measurement</td>
<td>8-10cm</td>
<td>Jacquard</td>
<td>Slug elimination</td>
<td>High twisted</td>
</tr>
</tbody>
</table>

Q. 2  

2X8 = 16

i. Answer the following in two or three sentences  

a. Indicate the conditions to be maintained during spinning of cocoons.

b. State the objectives of hot air drying of cocoons.

c. What is TPM and how it is introduced?

d. What types of defective cocoons are to be removed before taking up reeling?

ii. Fill in the blanks  

a. _____ and _____ are important cocoon characteristics for reeling.

b. Cooking is the process to _____ the coons and to _____ the ends.

c. For warp and weft preparation _____ and _____ range of twist inserted generally.

d. In soaking process _____ and _____ Chemicals are used to soften the yarn.

Q. 3 Write short notes on the following  

4X4 = 16

a. Deflossing and riddling

b. Two for one twisting

c. Multi end reeling package

d. Soft silk fabric

Q. 4  

2X8 = 16

i. Choose the correct answer from the answers given in the brackets  

a. Elongation of silk yarn is expressed as _____ (G/d, %, Kg/Cm²)

b. Crepe fabrics are made using _____ (High Twist, Low Twist, Zero twist)

c. Quality raw silk can be produced from _____ Machine (Charka, Cottage Basin, Multi end)

d. The fineness of silk filament yarn is expressed as _____ (Denier, Kilogram, Count)

ii. Answer the following in two or three sentences  

a. Define automatic silk reeling machine.

b. Advantages of conveyor cooking.

c. Types of tests carried out during silk testing.


Q. 5  

2X8 = 16

i. Answer the following in two or three sentences.  

a. What conditions are to be maintained in re-reeling process?

b. What are the advantages of pressurized cooking?

c. How the cocoons are to stored after drying?

d. Why reels are to be permeated before re-reeling?
ii. Match the following:

1. Serigraph  
2. Cohesion  
3. Skein weight  
4. Automatic reeling  

   a. Strokes  
   b. 70 to 140 grams  
   c. Bulk production  
   d. Tenacity

Q.6  
2X8=16

i. Fill in the blanks.

   a. _______ temperature and _______ to be maintained during re-reeling.
   b. _______ and _______ hardness of water is suitable for reeling.
   c. _______ quantity and _______ quality of raw silk is produced on Automatic silk reeling machine.
   d. _______ Croissance and _____ thread guide are used in charkha reeling.

ii Answer the following in two or three sentences.

   a. Define individual stop motion and planetary traverse mechanism.
   b. Advantages of boiler in silk reeling.
   c. What is water softening plant?
   d. Organzie silk yarn production and end uses.

Q.7  
2X8=16

i. Choose the correct answer from the answers given in the brackets.

   a. The visual testing of raw silk is done on _________ (Serip Plane, Serigraph, Winding)
   b. National standards of raw silk is published by _________ (ISA, ISI, BIS).
   c. Higher the denier _________ is the silk yarn (finer, coarser, lighter).
   d. Silk waste generated in reeling is used for (Matka, Spun silk, Raw silk).

ii. Answer the following in two or three sentences.

   a. Define types of Croissance.
   b. Define ‘Hot Air drying of cocoons’.
   c. Define ‘Warping machine’.
   d. What is lacing of raw silk and why is it done?

Q.8  
2X8=16

i. Answer the following in two or three sentences.

   a. How to decide cocoon quality suitable for reeling?
   b. Define reelability of cocoons.
   c. Advantages of two for one twister.
   d. Define size deviation of raw silk.

ii. State true or false

   a. Softened water should not be used for reeling ( )
   b. While twisting on TFO, feed package is also rotating ( ).
   c. Winding machine speed has effect on winding performance ( ).
   d. Drying under Sun is the best method of drying ( ).