THE TEXTILE ASSOCIATION [INDIA]
GM.T.A (REVISED) EXAMINATION – 2014
SECTION-D PAPER – D.7
SILK REELING AND TWISTING

Date: 30.12.2014 Marks: 100 Times: 02 pm to 05 pm

Instructions: 1. Attempt any six questions out of which Q.1 is compulsory.
2. Answer each next main question on new page.
3. Figure to the right indicates 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.

i. Fill in the blanks: 10
   a. _______ and _________ are the most important commercial cocoon characteristics.
   b. _______ and _________ are to be maintained during cocoon spinning
   c. Temperature used during the initial stage of cocoon drying process is _________.
   d. _______ & _______ Types of machines are generally used for silk twisting.
   e. Alkalinity of reeling water shall be in the range of ________.
   f. Silk fiber mainly contains _______ and _______.

ii. Write True or False: 05
   a. Chambon type of croissure is used in Cottage basin/Multiend reeling machines ( ).
   b. Permeation of reels before re-reeling will reduce breakages & gum spots in silk ( ).
   c. Defective cocoons do not have any influence of reeling thread troubles ( ).
   d. Good doubling is very crucial for efficient twisting ( ).
   e. Winding eliminates yarn imperfections ( ).

iii. Match the following: 05
   a. Buttons a. Speed measurement
   b. Crepe b. Twisted at two levels
   c. Organzine yarn c. Jacquard
   d. Stroboscope d. Slug elimination
   e. Intricate designs e. High Twisted

Q No. 2
i. Answer the following in two or three sentences: 08
   a. Mention the two factors influencing cocoon quality?
   b. What is TPM and how it is introduced?
c. What are the advantages of hot air drying?
d. What is de-flossing and ridding?

ii. Fill in the blanks:  
08

a. In soaking, soap is used to ________ the sericin and oil is used to ________ the yarn.
b. Cooking is the process to ________ the cocoons and to ________ the ends.
c. Twist required for Chiffon and georgette fabrics are in the range of ________ to ________
d. Different methods of cooking practiced in India are ________ and ________.

Q No. 3
Write short notes on the following: 16

a. Two for one twisting.
b. Automatic silk reeling.
d. Define raw silk testing.

Q No. 4
i. Choose the correct answer from the answers given in the brackets: 08

a. The fineness of silk filament yarn is expressed as ________ (Denier, Kilograms, Count)
b. Tenacity of silk yarn is expressed as ________ (Gm/den, Kg/cm², lbs/cm³)
c. Crepe fabrics are made by using ________ yarns (High twisted, Low twisted, Zero twisted)
d. Quality raw silk can be produced from ________ machine (Charka, Cottage basin, Multiend)

ii. Answer the following in two or three sentences: 08

a. What type of yarn is used for the production of chiffon fabric?
b. Define Multiend reeling machine?
c. Advantages of cocoon storage?
d. Define grading of raw silk?

Q No. 5
i. Answer the following in two or three sentences: 08

a. Which countries hold the number 1 & 2 positions in silk production in the world?
b. What is shell ratio of cocoons?
c. What are the advantages of pressurized cooking?
d. What types of cocoons are sorted?

ii. Match the following: 08
Q No. 6
i. Fill in the blanks:
   a. ______ alkalinity and _______ hardness of water suitable for reeling.
   b. _______ croissure and _______ thread guide are used in charkha reeling.
   c. ______ rpm winding speed is used for _______ denier of raw silk.

ii. Answer the following in two or three sentences:
   a. Define organzine silk yarn production and end uses?
   b. Define croissure and individual stop motion?
   c. Advantages of planetary traverse motion?
   d. Objectives and methods of cocoon cooking?

Q No. 7
i. Choose the correct answer from the answers given in the brackets:
   a. The machine used for testing tenacity is _______ (Seriplane, Serigraph, Serimeter)
   b. National standards of raw silk is published by _______ (ISA, ISI, BIS)
   c. Mulberry Silk is _______ yarn (Filament, Staple, Synthetic)
   d. Higher the denier _______ is the silk yarn (Finer, Coarser, lighter)

ii. Answer the following in two or three sentences:
   a. Define average filament length of cocoons?
   b. Define Multierd reeling machine?
   c. Gadgets to be used in doubling machine for better performance?
   d. What is lacing of raw silk and why it is done?

Q No. 8
i. Answer the following in two or three sentences:
   a. How to assess the quality of water suitable for reeling?
   b. Define Reel-ability of cocoons?
   c. Advantages of cocoon mixing?
   d. Define size deviation of raw silk?

ii. Write True or False:
   a. Soaked yarn should be dried under the sun ( )
   b. Humidity has no effect on winding performance ( ).
   c. Soft water should be used for soaking ( ).
   d. While twisting on TFO, feed package is also rotating ( ).