THE TEXTILE ASSOCIATION (INDIA)
A.T.A. (REVISED) PART-I EXAMINATION – 2013
PAPER – A 1.3
TEXTILE FIBRES

Date: 25.12.2013
M A R K S : 100
Time: 10 am to 1 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 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.

Q.1. a. State whether the following statements are true of false and if it is false rewrite the correct statement. (20)
i. Wet tensile strength of cotton is lower than its dry strength.
ii. Wool is soluble in 10% sulphuric acid.
iii. Cotton is having higher moisture content than wool.
iv. Jute is a bast fibre.
v. Acrylic fibre is manufactured by condensation polymerisation.
vi. Manufacturing of rayon is carried out by melt spinning method.
vii. Silk and wool both are polyamide fibres.
viii. Polyester is soluble in 70% (w/w) sulphuric acid.
ix. Nylon is soluble in formic acid.
x. Use of Titanium dioxide in spinning is to improve lustre.

Q.2. a. What are the recent developments of synthetic fibres (08)
b. Give the classification of fibres in detail. (08)

Q.3. Write short notes on (16)
a. Melt spinning
b. Manufacturing of acrylic fibres

Q.4. a. Explain in detail the identification of wool and silk by microscopic, chemical and burning methods. (08)
b. Discuss in detail the physical properties of cotton, wool, silk, flax and jute fibres (08)

Q.5. a. Discuss in brief the production of raw silk. (08)
b. Give the importance of blending of synthetic fibres with natural fibres. (08)

Q.6. Describe in detail the effect of heat, light, acids, alkalis on all types the textile fibres. (16)

Q.7. a. What are the various methods of fibre identifications? Explain. (08)
b. Discuss in detail the manufacturing of Viscose. (08)

Q.8. Answer the following (Any Four) (16)
i. Give the reactions involved in manufacturing of polyester
ii. What do you meant by regenerated and synthetic fibres? Give two examples of each.
iii. Give the applications of various textile fibres.
iv. Write a note on ‘different types of Nylons’.
v. Describe the manufacturing process of polyfosnic fibre with a flow sheet diagram.

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