THE TEXTILE ASSOCIATION (INDIA)
A.T.A. (REVISED) EXAMINATION – 2015
Part I – A 1.3

TEXTILE FIBRES

Date: 26.12.2015       Marks: 100       Time: 10 am to 1 pm

Instructions: 1. Attempt six questions out of which Q1 is compulsory
             2. Answer each next question on new page
             3. Figure to the right indicate 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

Q1 State whether the following statements are true or false and if it is false rewrite the correct statement.
   a. Cotton is soluble in 10% sodium hydroxide. 20 marks
   b. Polyester is having higher alkali resistance.
   c. Burning of cotton give smell of burning of hair.
   d. Acrylic fibre is used as substitute fibre for wool in winter garments.
   e. Manufacturing of rayon is carried out by melt spinning method.
   f. Main component of silk filament is Keratin.
   g. Polyester is soluble in 70% w/w sulphuric acid.
   h. Burning of cotton give smell of burning of hair.
   i. Nylon is not polyamide fibre
   j. Tensile strength of viscose in wet condition is lower than dry strength.

Q2 a. Give the classification of fibres in details with examples. 08
     b. Describe the essential properties of fibres for textile applications. 08

Q3 a. Describe in detail the Production of silk. 06
     b. Write the chemistry and applications of wool fibres/fabrics. 06

Q4 a. Explain with diagram the melt spinning of polyester. 08
     b. Write a note on ‘Manufacturing of Viscose rayon’. 08

Q5 a. Write in detail manufacturing and properties of nylon 08
     b. How cotton and viscose is identified by burning, solubility and microscopic tests? 08

Q6 a. What are the recent developments in man-made fibres? 08
     b. Describe the Effect of acid and alkalis on wool, silk, fax and jute. 08

Q7 Describe in detail the effect of heat, light, acids, alkalis on all textile fibres. 16

Q8 Write a short note on the following (ANY FOUR).
a) Solubility test for textile fibres. b) Different types of Nylons c) Physical properties of cotton. d) Blending of polyester with cotton.