THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2013
SECTION-C PAPER-I (C-1)
TEXTILE FIBRE SCIENCE

Date: 23.12.2013
Marks : 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. What are the basic requirements of a textile fibre? (06)
b. How these basic requirements are fulfilled in natural and manmade fibre? (07)
c. Briefly explain the physical and chemical properties of any one natural and
   manmade fibres. (07)

Q.2. a. Briefly explain the production and properties of viscose Rayon (12)
b. What are eco friendly regenerated fibres? (04)

Q.3. Discuss in brief the production of polyester fibre from DMT and TPA
   Routes separately. (16)

Q.4. Explain in detail the morphology and five structure of the following fibres. (16)
i. Cotton
   ii. Silk
   iii. Viscose
   iv. Polyester

Q.5. Define or explain the following:
i. Moisture content
   ii. Moisture regain
   iii. Heat of wetting
   iv. Moisture equilibrium

Q.6. a. What are the factors affecting textile behavior of textile fibres. (08)
b. Explain in brief the yield point, crimp creep behavior of few textile fibres. (08)

Q.7 a. What is the significance of fibre surface to pography oh optical properties of
   Textile fibres. (08)
b. Discuss in brief few electrical drops of fibres. (08)

Q.8. a. Comparison of properties of different polyamide fibres. (04)
b. Modification of polyester fibres for specific end user. (04)
c. Manufacture of new generation Bio-degradable. (04)
d. refractive index of fibres. (04)

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