THE TEXTILE ASSOCIATION (INDIA)
A.T.A. (REVISED) EXAMINATION – 2016
PART III (COMPULSORY SUBJECTS)
ELEMENTS OF TECHNICAL TEXTILES

Date: 23.12.2016  Marks: 100  Time: 10.00am to 1.00 pm

INSTRUCTIONS:
1. Attempt any six questions out of which Q.1 is compulsory
2. Answer each next main question on new page
3. Figures to right indicate full marks
4. Illustrate your answers with sketches and flowcharts wherever necessary
5. Use of non-programmable electronic pocket calculator permissible
6. Mobile or any other communicable device is not permitted in the exam hall
7. Assume suitable data wherever necessary

Q.1 i) Define technical textile products. List the different segments of technical products based on their application areas. 08
     ii) How are technical textiles different from conventional textiles? Justify the following products as technical textiles:
         a) Surgeon’s gown  b) Tarpaulin fabric
         c) Parachute fabric  d) Conveyor belt

Q.2 i) What are Geotextiles? List the different properties essential for fibre to be used in geotextile. Name the fibres suitable for geotextile application 08
     ii) Illustrate with help of example the different functions performed by Geotextile

Q.3 i) Define nonwoven fabrics. What are their advantages over woven and knitted fabrics? 06
     ii) Explain with a neat and labeled diagram the needle-punched nonwoven manufacturing. 10

Q.4 i) Define Medical Textiles. Classify them based on their application. 10
     ii) List the different fibres used in the field of medical textiles 06

Q.5 i) Explain the various types of protective textiles based on the functions they perform. 08
     ii) What are defense textiles? Explain the various functional requirements for defense textiles. 08

Q.6 i) Differentiate between coating and laminating processes 08
     ii) Explain briefly two common methods of coating textiles 08

Q.7 i) Explain in detail the properties of textile materials used in filtration. 08
     ii) What is chaffer fabric? How is it used in tyre cord industry 08

Q.8 Write short note on Any Two
     i) Textiles in conveyor belt
     ii) Sports textiles
     iii) Flame retardant textiles

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