THE TEXTILE ASSOCIATION (INDIA)
GMTA (REVISED) EXAMINATION – 2018
Non Woven Technology
Section – D   Paper: SOD.1
Marks: 100

Date: 27.12.2018
Time: 2.00pm to 5.00 pm

Instructions:
1. Attempt any six questions out of which
2. Answer each next question on new page. Q. 1 is compulsory.
3. Figures to the right in the bracket indicate full marks.
4. Illustrate your answer with sketches and flow charts wherever necessary.
5. Use of non-programmable electronic pocket calculator is permissible.
6. Mobile and any other communication devices are not allowed in the examination hall.
7. Assume suitable data wherever necessary.

Q1. Choose the appropriate answer from the multiple choices in the following - [20]

a. Which of the following characteristics of a barb differentiates among K barb, NK barb, and B barb?
   a. Angle
   b. Kick-up
   c. Spacing
   d. Depth.

b. Which of the following modes of heat transfer takes place during through-air thermal bonding process?
   a. Conduction
   b. Convection
   c. Radiation
   d. None of the above

c. Which of the following statements is known as Stefan Boltzmann's law?
   a. Chemical binders are copolymers formed by condensation polymerization.
   b. Chemical binders are polymers formed by condensation polymerization.
   c. Chemical binders are copolymers formed by emulsion polymerization.
   d. Chemical binders are polymers formed by condensation polymerization

d. Which of the following needles is used for making velour fabric?
   a. Triangular needle
   b. Star bladed needle
   c. Fork needle
   d. Crown needle

e. Which of the following statements is true for spun bond process?
   a. It requires thermoplastic polymers of low MFI
   b. It requires thermosetting polymers of low MFI.
   c. It requires thermoplastic polymers of high MFI.
   d. It requires thermosetting polymers of high MFI.

f. Which of the following bonding methods is generally following in spunbond process?
a. Needle punching
b. Thermal calendar bonding
c. Chemical bonding
d. Hydro entanglement
g. Which of the following process sequences is correct for melt blown process?
   a. preparation, extrusion, quenching, attenuation, lay-down, winding.
   b. preparation, extrusion, drawing, attenuation, lay-down, winding.
   c. preparation, extrusion, quenching, lay-down, attenuation, winding.
   d. preparation, quenching, extrusion, attenuation, lay-down, winding
h. Which of the following statements is true for melt blown process?
   a. It requires thermoplastic polymers of low MFI
   b. It requires thermosetting polymers of low MFI.
   c. It requires thermoplastic polymers of high MFI.
   d. It requires thermosetting polymers of high MFI.
i. Which of the following modes of heat transfer takes place during thermal calendar bonding process?
   i. Conduction
   ii. Convection
   iii. Radiation
   iv. None of the above
j. Which of the following statements is true?
   a. Shearing is a process of removing surface fibres from the fabric by the help of a flame
   b. Shearing is a process of removing surface fibres from the fabric by the help of cropping
   c. Shearing is a process of removing surface fibres from the fabric by the help of hammering
   d. Shearing is a process of removing surface fibres from the fabric by the help of calendaring

Q2.
   a. Discuss the application of Medical Textiles with examples. [8]
   b. Write a short note on fibres used in Medical textile. Make a list of medical textiles. [8]

Q3.
   a. What the broad fields are of Technical Textile? Describe any four in short. [8]
   b. Describe the fibres with application areas used in technical Textiles. [8]

Q4.
   a. Describe elaborately properties of sports textile and three examples of sports textile. [8]
   b. Discuss the function and application of home Textiles. [8]

Q5.
   a. Write a short note on fibers used in Geo textiles. Describe the function and composition of Geogrid. [8]
   b. What are the properties desired in the bonding agent? [8]

Q6.
   a. Write short notes on the characteristic features of Nonwoven fabric. [8]
   b. Describe Chemical bonding process in detail. [8]

Q7.
   a. Write short note on Agro textiles and its benefits with examples. [8]
   b. Discuss the function and application of defence Textiles. [8]

Q8.
   c. Describe elaborately properties of Agro textile and six examples of Agro textile. [8]
   d. Discuss the function and application of Geo Textile. [8]