Major Test TTL241
Technology of Textile Preparation and Finishing

02.12.2006
10:30-12:30
MM: 35

Note: (Please answer questions in sequence). Attempt Part A and B in separate Answer Books.

Part A

Q1. Name the main impurities of raw wool. Give a method for removing each of these. Why wool is scoured twice in the production of woolen products? What is milling of woolen fabrics and why and how it is carried out. [3]

Q2. Describe the various mechanisms that have been proposed for the self-cleaning property of nano TiO_2. [3]

Part B

Q1 . Discuss the following approaches with respect to FR treatment for textile fibres; Give the chemicals used and the mechanism of action: [6]

a) Physical
b) Physico chemical
c) Synergistic behaviour

Q2. Define UPF. If you were asked to develop a fabric with very high UPF for summer wear- how would you go about doing it ? (Discuss fibre, yarn, fabric and finish parameters). [3]

Q3. Explain. [14]

a) Polydimethyl siloxane(PDMS) compounds act as good softeners as well as hydrophobic agents,
b)What is repellency? How can textile surfaces be made repellent?
c) Why does tensile strength and abrasion resistance of cotton reduce down after easy care finishing?
d) Why RF dryers are preferred over IR dryers.
e) The advantages and disadvantages of pre cure and post cure methods of easy care finish application.
f) Principle of friction calendaring
g) Stages of drying of textiles.

Q4. Give a) one chemical used and b) the prineiple for the application of following: [6]

a) Low Formaldehyde reactant for Easy care finishing
b) Catalyst for Easy care finish
c) Durable antimicrobial finish for cotton textiles
d) Condensed phase FR agent for cotton
e) UPF agent
f) Viscosity builder for foam application