THE TEXTILE ASSOCIATION (INDIA)
C.M.T.A. (REVISED) EXAMINATION – 2014
SECTION-C PAPER - C-2
POLYMER TECHNOLOGY

Date: 25.12.2014  MARKS: 100  Time. 10.00 a.m. to 01.00 p.m.

Instructions:
1. Attempt any six questions out of which Q.1 is compulsory.
2. Figures to the right hand side indicates full marks
3. Illustrate your answer with suitable sketches and flow charts wherever necessary.
4. Assume suitable data wherever necessary

Q. 1 Attempt any five
   a. What is monomer? How polymer is prepared?
   b. Classify polymer.
   c. Differentiate between homopolymer and copolymer
   d. Explain steps involved in polymerization
   e. What is initiator? Explain various initiators for polymerization process.
   f. How glass transition temperature is determined?

Q. 2a) What is polymer? Explain how Polyester is prepared?
   b) How degradation of polymer can be controlled

Q. 3 Write a short note
   a) Graft Polymerization.  b) Importance of Initiator in polymerization.
   c) Glass Transition temperature  d) Addition and Condensation polymerization

Q. 4 Explain kinetics of polymerization. Which parameters effects on kinetics of polymerization

Q. 5 a) Explain how thermal characterization of polymer is done?
   b) What is co-polymer? Explain copolymerization reaction?

Q. 6 a) Write a note on i) Rheology of polymers  ii) Vinyl polymers.
   b) What are conducting polymers? Explain how Nylon 6,6 prepared

Q.7a) Explain tacticity of polymers?
   b) Explain how cationic dye-able polyester

Q.8 a) What is degree of polymerization? Explain how molecular weight of polymers can be determined.
   b) What are factors affecting on dry and wet corrosion?
   c) Explain importance of ageing analysis of polymers