THE TEXTILE ASSOCIATION (INDIA)
GMTA  EXAMINATION – 2018
SECTION – CPAPER – C.2
POLYMER TECHNOLOGY

Date: 23.12.2018    MARKS: 100    Time: 10.00 am to 01.00 pm

Instructions:
1. Attempt any Six questions out of which Q.1 is Compulsory
2. Answer each next question on new page
3. Figures to the right indicate full marks
4. Illustrate your answers with neat sketches & 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

Q.1   Attempt any five  

a  What is polymer? Explain different types of polymers.

b  What is glass transition temperature of polymer? Explain its importance.

c  Explain use of initiator in polymerization reaction.

d  What polymerization reaction? Classify polymerization reaction.

e  Explain degree of polymerization.

f  Explain the importance of antioxidant in polymer industry.

Q.2   What is tacticity? Explain syndio, iso and atactic polymers

Q.3   Write short notes on the following:

a.  Graft Polymerization

b.  Use of polyester in Textiles

c.  Nylon 6

d.  Polymerization Reaction

Q.4   a  What is polymer degradation? Explain various types polymer degradation.

b  How do time and temperature of polymer reaction affect on Properties of Polymer?

Q.5   a  Write anote on ‘Weight average and Number average molecular weigh’

b  Discuss ageing analysis of polymer.

Q.6   What is rheology of polymeric solution? Explain it with viscous, plastic and visco-elastic flow.

Q.7   a  Explain importance of polymerization in enhancing properties of Textile fibre.

b  Explain ring opening polymerization.

c  What are properties required for polymer to become textile fibre?
Q 8  a  Explain manufacturing process of Polyester. Given example of Vinyl polymers.  08
b  What is recycling of polymer? How is it important for environment?  04
c  Explain use of inhibitor in polymer degradation.  04

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