

MID SEMESTER EXAMINATION

MAR-2019

PT 206 POLYMER STRUCTURE AND PROPERTIES

Time: 1:30 Hours

Max. Marks : 30

Note : All questions carry equal marks.
Assume suitable missing data, if any.

1. (a) T_g and T_m of PE is very much lower than Nylon 6
explain the statement in detail.
(b) Show how Maxwell model of viscoelasticity explains
relaxation but not creep.
2. (a) What is the principle of DMA? Show how DMA is
used to find T_g of a polymer sample
(b) Drive the expression for loss factor by applying
oscillatory force on a polymeric sample.
3. (a) Draw a TGA curve for a common blend co-polymer of
80% polyester and 20% polystyrene at standard conditions
and explain the features.
(b) Identify its type and explain the rheological features of
Chocolate and Tooth paste
4. (a) What is Weissenburg effect explain briefly.
(b) Explain typical features of DSC thermogram of a
polymer
5. Explain thermodynamically the effect of stress on a rubber
sample as a function of temperature.

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