

TXL212

Minor 2

Time 45 minutes

Answer all questions

- 1 (a) It is important to maintain moisture-free inert atmosphere during PET production. Explain with chemical reactions. 2
- (b) What are the side reactions during PET polymerization during melt spinning? 3
2. (a) Explain the mechanism of thermo-oxidative degradation of polypropylene and enumerate the methods by which it can be inhibited. 4
- (b) Explain basic working principle of FTIR. 1
- 3 (a) Why most polymer melt/solutions show shear-thinning behavior? 2
- (b) Which signatures of polymeric fluids separate them from Newtonian behavior? 3
- 4 (a) What are the necessary requirements for spinnability? 2
- (b) On which factors die swell depends? 2
- (c) What is the characteristic feature of Bingham Fluid? 1