Engineering materials week

Engineering

Differentiate between polymorphism (see Chapter 3) and . Polymorphism is when two or more crystal structures are possible for a material of given composition. Is when two or more polymer molecules have the same composition, but different atomic arrangements. 14. 3 What is the difference between configuration and conformation in relation to polymer chains?

The difference between configuration and conformation is that conformation is used in reference to he outline or shape of the chain molecule, configuration refers to the arrangement of atom positions along the chain that are not alterable except by the breaking and reforming of primary bonds. 15. 9 During the winter months, the temperature in some parts of Alaska may go as low as - (-). Of the lassoers natural , -butadiene, , , and , which would be suitable for automobile tires under these conditions?

Why? Only natural , poly (-butadiene), and have useful temperature range's that extend to below -. At temperatures below the lower useful temperature range limit, the other lassoers listed become brittle, and are not suitable for automobile tires. 15. 11 Cite whether the molecular weight of a polymer that is synthesized by addition popularization Is relatively high, medium, or relatively low for the following situations: (a) Rapid initiation, slow propagation, and rapid termination.

For rapid Initiation, slow propagation, and rapid termination the molecular weight will be relatively low. B) Slow initiation, rapid propagation, and slow termination. For slow Initiation, rapid propagation, and slow termination the molecular weight will be relatively high. (c) Rapid initiation, rapid propagation, and slow termination. For rapid Initiation, rapid propagation,

and slow termination a medium molecular weight will be achieved. (d) Slow Initiation, slow propagation, and rapid termination. For slow Initiation, slow propagation, and rapid termination the molecular weight will be low or medium.