

Part B – Structured Essay Questions

1.
 - (a) What are the common preservatives used in latex industry?

 - (b) Name the methods used to manufacture concentrated latex?

 - (c) What is the amount of dry rubber percentage in 100 parts of concentrated latex?

 - (d) Give reasons for the differences in properties between synthetic isoprene rubber and natural rubber?

2. (a) Draw the structures of 100% cis and trans polybutadiene.

(b) Which polymer is more elastic, give reasons for your answer?

(c) Arrange the following three polymers in the order of increasing T_g
polystyrene, polyacrylonitrile, polyvinylalcohol

(d) Briefly write down how you convert term semi crystalline polymer to 100% amorphous polymer?

Polymer Chemistry-CHU 3238 (Level v)

Assignment test II - Answer Guide 2006/2007

Part A

- | | |
|------|-------|
| 1. 4 | 11. 2 |
| 2. 5 | 12. 1 |
| 3. 1 | 13. 2 |
| 4. 5 | 14. 5 |
| 5. 2 | 15. 2 |
| 6. 4 | 16. 5 |
| 7. 3 | 17. 5 |
| 8. 1 | 18. 1 |
| 9. 1 | 19. 1 |
| 10.1 | 20. 4 |

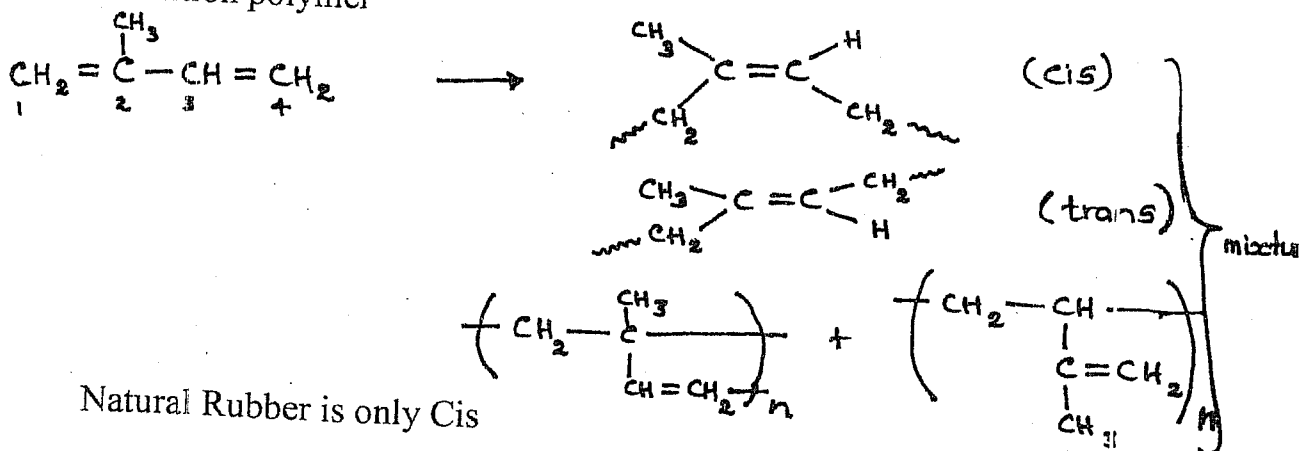
Part B

- (1). (a) * NH_3 solution
 * Formaline or Formaldehyde
 * Na_2SO_3 (Sodium Sulphite)
 * Sodium Carbonate
 * Na_2HPO_4

- (b) # Centrifuge
 # Creaming
 # Electrolysis

(C) 60

- (D) Synthetic isoprene is a mixture of Cis, trans & 1,2 addition & 3,4 addition polymer



Natural Rubber is only Cis

(2). (a)

cis



trans



like a spring

(b) Cis is more elastic it's structure is similar to a spring

(c) Polystyrene > Polyacrylonitrile > Polyvinylalcohol

(d) Melt and sudden cooling by immersing it in cold water