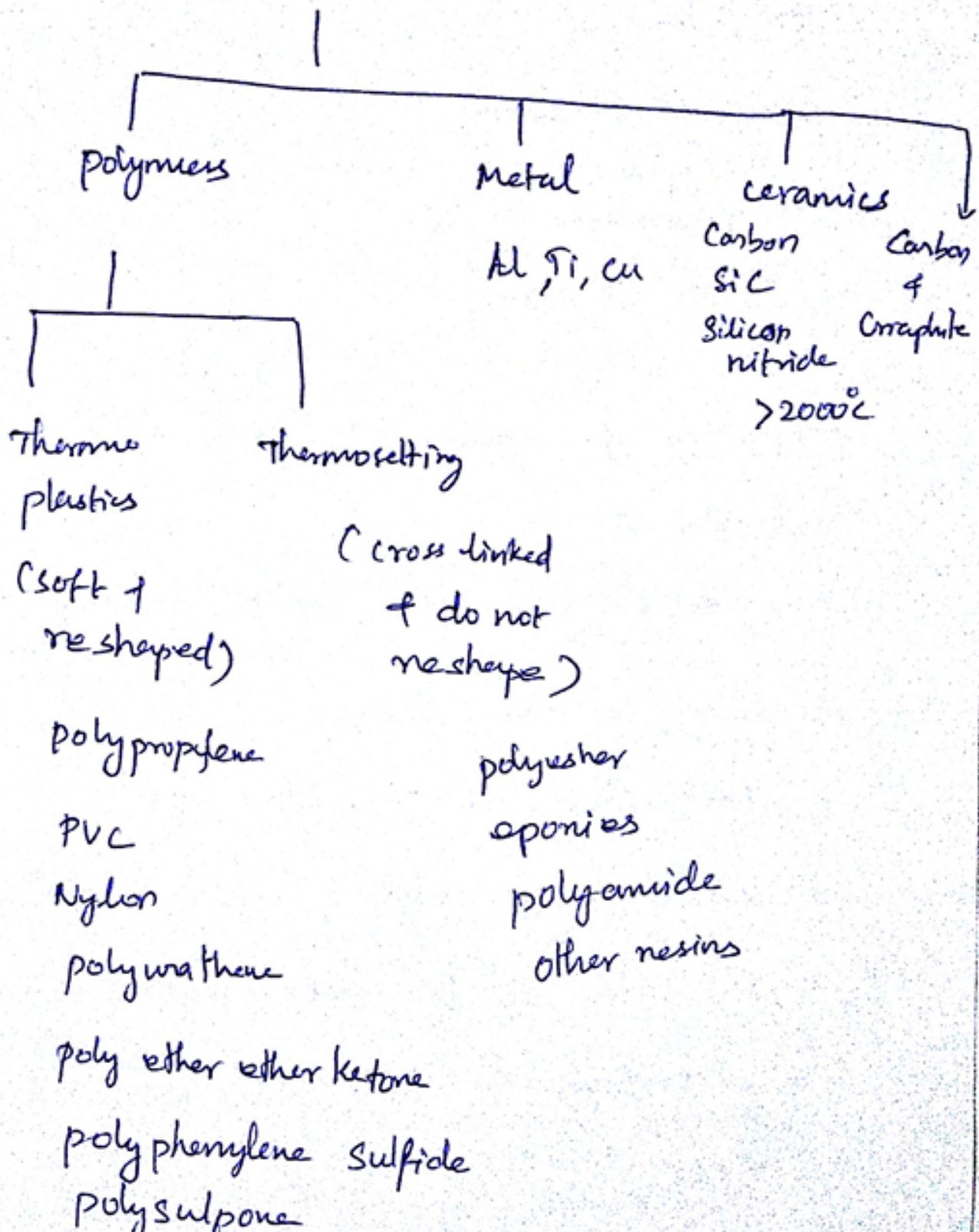


Particle Reinforced Composite

Matrix Materials



thermoplastic

- higher toughness
- high volume
- low cost processing
- Temperature range $\geq 225^{\circ}\text{C}$

properties of fibrous composite

1. length
2. orientation of fibre w.r. to loading direction
3. shape of the fibre
4. Distribution of the fibre
5. properties of fibre
6. properties of the matrix material
7. proportion of fibre and matrix material

5.5

Reinforce materials

Glass fibre

Carbon fibre

Organic fibre (polyamides)

Ceramic fibres (B)

Silicon carbide (SiC)

Kevlar

Polyamide

MMC

CMC