

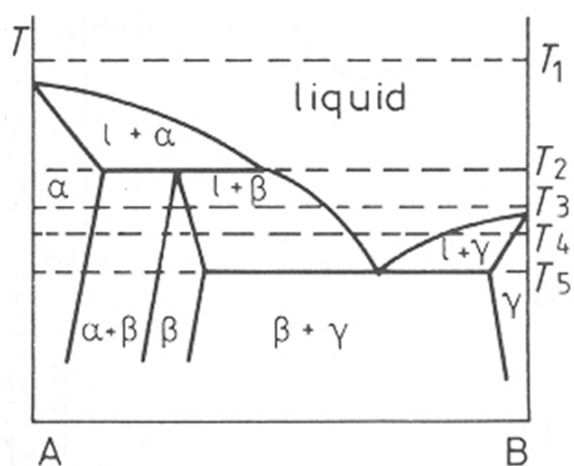
Phase Transformation of Materials

2018 fall

10. 16. 2018

PIN # _____ Class # _____ Name: _____

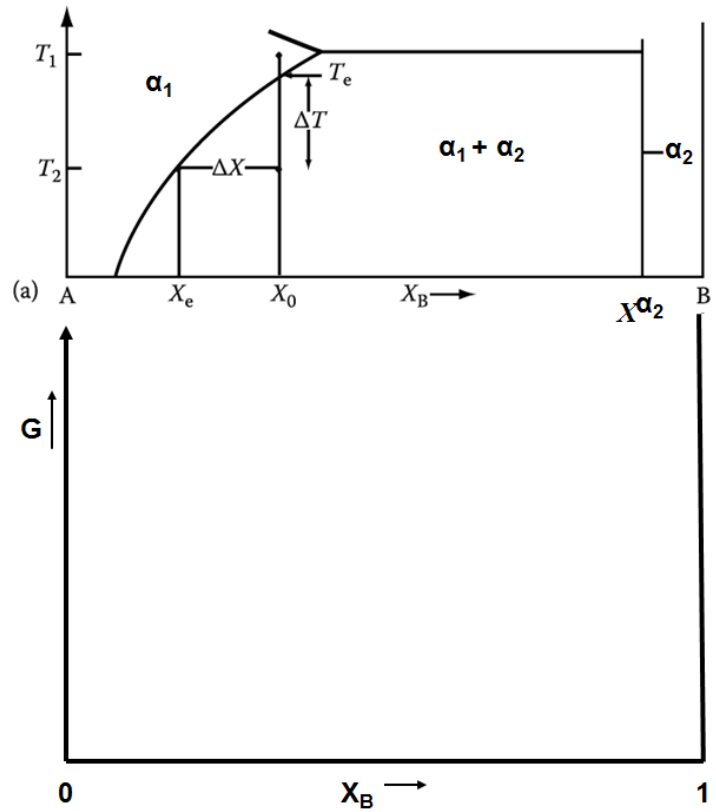
1. Based on the following binary phase diagram, draw Gibbs free energy (G)-composition (X) diagram at T_2 .



2. Explain why (a) superheating rarely occurs during solid→liquid phase transformation whereas (b) supercooling occurs so commonly during liquid→solid phase transformation.

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3. With reference to the following binary phase diagram, draw schematic diagram for free energy changes during precipitation ($\alpha_1 \rightarrow \alpha_2$) at T_2 in X_0 composition and explain the difference between driving forces for precipitation reaction and nucleation. (4 points)



* Suggestion for class or request for personal conversation: