

系所組別： 口腔醫學研究所丙組

考試科目： 材料科學

考試日期： 0226，節次： 2

1. List four characteristics or structural components of a polymer that affect both its melting and glass-transition temperatures. (10%)
2. Explain (a) Hall effect, (b) Interstitial solid solution, (c) Pitting, (d) Whisker, (e) Bifunctional. (20%)
3. Describe and explain the differences between recovery and recrystallization process. (10%)
4. Name and describe four casting techniques. (10%)
5. How would you expect a decrease in the austenite grain size to affect the hardenability of a steel alloy? Why? (10%)
6. Design an experiment to measure the diffusion coefficient. (10%)
7. Describe and explain the structural composites. (10%)
8. Describe and explain the three types of polarization. (10%)
9. What is the driving force for phase transformation? Describe and explain the relation between reaction rate and temperature. (10%)