

# 大同大學 100 學年度轉學入學考試試題

考試科目:材料導論

所別:材料工程學系

第 1/1 頁

註:本次考試 不可以參考自己的書籍及筆記; 不可以使用字典; 不可以使用計算器。

1. Sketch the (012) plane and [012] direction within a tetragonal (正方) unit cell. (10%)
2. What is the relationship between dislocation and plastic deformation of metals? (10%)
3. What is the relationship between grain boundary and plastic deformation of metals? (10%)
4. What is “solid solutions”? (10%)
5. What is “recrystallization” during annealing treatment of a metal? (10%)
6. Name and describe the two atomic mechanisms (機構) of diffusion. (10%)
7. What is the method that is usually used to study the crystal structure of solids? (5%)
8. What is the difference in *stacking sequence* (堆積順序) between the two close-packed crystal structures of metals? (5%)
9. What is “dislocations”? (10%)
10. What is “slip systems”? (10%)
11. Plot tensile stress-strain curves for ductile and brittle materials loaded to fracture. (10%)