

逢甲大學100學年度碩士班招生考試試題 編號：005 科目代碼：304

科目	機械製造 (含機械製造、 機械材料)	適用 系所	機械與電腦輔助工程學系機械 工程碩士班製造組	時間	120 分鐘
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※請務必在答案卷作答區內作答。

1. 圖示 Fe-C 平衡圖，並說明將 0.16%C 碳鋼自液態徐冷至室溫之過程中，於(1)1496°C、(2) 1492°C、(3) 910°C、(4) 730°C、(5) 725°C、(6)室溫時之組織各為何。(30%)
2. 說明不銹鋼之分類，並分別簡述其特性。(20%)
3. 試述消失模型鑄造法(Evaporative Pattern Casting Process)之流程，並例舉 2 個工業上之應用例子。(25%)
4. 粉末冶金製程中之粉末加壓成型方式有哪些？並說明其所變獲得之成型體的生壓胚(Green compact)之密度分佈特徵！(25%)
5. Distinguish between redrawing and reverse drawing. (10%)
6. Identify the basic types of sheet metalworking operations. (10%)
7. Distinguish between roll bending and roll forming. (10%)
8. Identify the mechanisms by which cutting tools wear during machining. (10%)
9. What are the basic factors that affect surface finish in machining? (10%)
10. Describe the difference between up milling and down milling? (10%)
11. What are the five principal parameters of a grinding wheel? (10%)
12. Describe the difference between TIG and MIG? (10%)
13. Name and briefly describe the three types of chips that occur in metal cutting. (10%)
14. Distinguish between rotational parts and prismatic parts in machining. (10%)