

國立虎尾科技大學機械與機電工程研究所博士班資格考試試題

科目名稱：機械製造

2008/05

班級：_____ 學號：_____ 姓名：_____ 成績：_____

1. Describe the methods used for producing single-crystal parts. (10%)
2. Explain the difference between open-die and impression-die forging? (10%)
3. Describe briefly the production steps involved in making powder-metallurgy parts. (10%)
4. What are the major requirements for cutting-tool materials? (10%)
5. State whether you would set the height of the tool in a turning operation at the center of the workpiece, a little above it, or a little below it. Explain why. (10%)
6. Explain what is meant by a grinding wheel acting soft or hard. (10%)
7. Why has electrical-discharge machining become so widely used? (10%)
8. Explain what is meant by solid-state welding. (10%)
9. Why are surface roughness design requirements in engineering so broad? (10%)
10. Explain the principle of an air gage. What advantages do they have over other types of gages? (10%)