

國立臺北科技大學
100 學年度研究所碩士在職專班入學考試

電腦與通訊研究所
甲組：計算機結構試題

填准考證號碼

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注意事項：

1. 本試題共【5】題，配分共 100 分。
2. 請按順序標明題號作答，不必抄題。
3. 全部答案均須答在試卷答案欄內，否則不予計分。

1. Please describe the following terms and explain the advantages and disadvantages of the following terms. (20 points)
 - (1) Single cycle and pipeline processor (10 points)
 - (2) RISC and CISC (10 points)
2. What is the difference between a write-through policy and a write-back policy? Please explain which policy cannot be used in a virtual memory system. (20 points)
3. Please explain the difference between SIMD and SPMD. (15 points)

4. The following bit pattern is an IEEE 754 standard single precision floating point number. Please write down the related decimal number. (15 points)

1000 1110 1110 1111 0100 0000 0000 0000

5. ARM processors are used in a wide range of embedded applications. What is Thumb bit and programmers' model? Please explain the relationship between ARM and Thumb instruction sets. (30 points)