

國立高雄應用科技大學  
九十七學年度碩士班招生考試  
電機工程系（丙組）

准考證號碼  （考生必須填寫）

計算機結構

試題 共 2 頁，第 1 頁

注意：a. 本試題共 5 題，每題 分，共 100 分。

b. 作答時不必抄題。

c. 考生作答前請詳閱答案卷之考生注意事項。

1. Please select one correct answer: For microprocessors, the words of a machine's language are called instructions, and its vocabulary is called:  
(A). An algorithm. (B). An instruction set. (C). A register.  
(D). A complier. (5%)
2. Please explain what is "pipelining" approach in the field of computer architecture. What are the advantages of "pipelining" approach used in the architecture design of computer systems. (20%)
3. Please compare "write-through" and "write-back" in the design of cache systems. (25%)
4. Briefly explain what TLB is and what function it provides. (20%)

5. The choice of associativity in memory hierarchy depends on the time cost of cache miss and the hardware cost of implementation. Please answer: (a). Discuss the advantages and disadvantages of caches moving from direct-mapped to set-associative caches. (b). Compare the different considerations for the choice of associativity in designing caches, TLB, and virtual memory. (30%)