1. **(15%)** List three write-to-memory approaches and explain in details.
2. **(15%)** Write down the instruction format of CISC and RISC microprocessors, compare their disadvantages and advantages.
3. **(20%)** Describe logic address space and physical address space. To access an item in the nonlinear logic space, how many logic entities it is required to have? Describe three methods to implement virtual memory.
4. **(15%)** 試述單晶片微電腦與一般微處理機的差異。各舉日常生活中的數位電子電器數種，說明這些電器的處理控制中心是上述兩類中的那一種。
5. **(15%)** 現欲以微處理機設計一數位系統，請畫出系統圖並建議需要用到哪些發展工具，簡要解釋每種發展工具的用途。
6. **(20%)** 試解釋 Cache 記憶體對微處理機性能(performance)的影響。何謂 Cache hit？何謂 Cache miss？如何量測 Cache performance (舉兩種方法說明之)？