

1. List and describe the levels of management. And explain in detail what information systems best satisfy the needs of various levels of management. (20%)
2. Briefly list the stages of the systems development life cycle and describe the work involved in each stage. (15%)
3. Explain the following terms. (10%, each for 2 points)
  - a) virtual memory
  - b) cache memory
  - c) deadlock
  - d) spooling
  - e) client-server computing
4. Define binary tree and give three different traversal algorithms. (15%)
5. When we use telephones for computer data communications, why do we need modems? (5%)
6. Describe the methods for passing parameters in programming languages, and give an example to show the difference among them. (15%)
7. 大家都說這個時代是「資訊時代」(information society)。請說明其主要的特徵(10%)。其次，在資訊時代裡，由於電腦或資訊科技之發明與使用，引生了一些倫理的議題(ethical issues)或問題。請列舉並說明其中的四大類議題(10%)。