九十二學年度 計算機概論

1. Please describe the advantages and disadvantage of Microsoft window and Linux OS with the following three respects, 1) maintenance and management, 2) software and hardware compatibility, 3) executing performance. (15%)

2. What is polymorphism in Object Oriented Language? (5%)   Please describe it with the overriding mechanism. (5%)

3. Relational Database could be used to store data and it is very helpful for researchers to analyze the data and get important information. Please describe the characteristics of relational database? (10%) And use ER model to construct the relationship for courses, students and teachers? (10%)

4. Why does TCP/IP protocol play an important role in the Internet? Please list your opinions based on the concept of the OSI layers (15%)

5. With inheritance mechanism, please write three Java classes for point, square and cube, respectively? (10%)   Use another mechanism, composition, to design point, square and cube ? (10%)

6. Try to explain what SMP(Symmetric Multiple Processors) is and figure its architecture with processors, memory and bus. (20%)