1. Define and compare the following computer networks: Internet, Extranet, and Intranet. How can an enterprise utilize the above three networks to improve enterprise's business operations, managerial control and strategic advantages? (15%)

2. Explain "Y2K problem." (5%)

3. Electronic Commerce (EC) is a new trend for business transactions. Please name any five types of technology which are related to EC and briefly describe their relationship to EC. (15%)

4. Three types of controls must be developed to ensure the quality and security of information systems. These control categories are information system controls, procedural controls, and physical facility controls. Please describe the major methods and contents of the three categories of controls. (20%)

5. Information Systems Planning is critical to management. Two major planning technologies for information systems are Business Systems Planning (BSP) and Critical Success Factors (CSF). Please briefly describe the CSF approach. (15%)

6. Case Study (30 points)

   **The CIO/CEO Connection at ABC Paid Off**

   ABC Co. is facing challenges from new technologies, and strong competitors. ABC had to reengineer itself. In 1993 ABC outsourced its IT operations, in the deal of a $3.2 billion, 13-year contract. Despite the outsourcing, ABC kept its CIO, Pat Li, at a very high corporate position. She engineered the outsourcing and so far she has kept her job for 6 years. The CEO said that ABC gave Pat long-term projects with long-term payoff (報酬). Her job is to get ABC ready for the 21 century.
Li developed a strategic plan called IM2K. IM2K includes 3 key strategies: outsourcing, replacing proprietary infrastructure with a standard one, and creating an investment fund to support the reengineering of IT. ABC reengineered 4 key areas: customer service, sale cycle (time-to-market), integrated supply chain, and employee relations. The key to Li’s success is considered to be her ability to create a roadmap for others to follow. She had a vision and she knows how to implement it through special teams.

As IT continues to play an increasingly important role in enabling companies to become more competitive, CIOs and other IT executives must think beyond glass-house borders. But perhaps most important is the ability to find the right people both in the IS organization and among the end users to implement visions.

Li works with an IS committee which includes IS experts from each business unit. One of the major tasks of the committee is to review the IT project requests of the units, which are submitted annually. The committee meets once a month to discuss IT strategy and implementation. In addition, Li created the office of the CIO, consisting of herself and her two assistants, the director of IT operations, and the director of IT finance. This committee meets almost daily to turn the IM organization.

Questions:
1. Why is a CIO needed if the IS function is outsourced?
2. It is said that the CIO/CEO relations are critical, and that Pat had the backing of the CEO to make bold decisions. Comment.
3. Pat was extensively using the “IS by committee” approach. What are the major benefits of it?
4. Comment on ABC’s BPR plan (IM2K).