1. Please answer the following questions, respectively. (50%)

   a. Within Value Chain Management, company will normally adopt the concept of postponement to prolong the time of maintaining product flexibility. Please compare postponement with speculation for their pros and cons from various perspectives. (15%)

   b. Utilize the general four stages product life cycle model to address issues of volume, profit, and competitors for any consumer electronic product in Taiwan. (20%)

   c. For the protection of innovation, what is the rationale behind the company to make the decision of patent versus trade secret? (15%)

2. a) (20%)terminology
   i.   work breakdown structure
   ii. one-worker, multiple-machines cell
   iii. vendor managed inventory
   iv. newsboy problem
   v.   advanced planning and scheduling system

   b) (6%) What are the differences between backlog and backorder?

   c) (6%) What is Drum-Buffer-Rope system?

   d) (10%) What are the differences between P-system and Q-system in inventory control policy? Please give examples to explain them.

   e) (8%) What are the inputs and outputs to/from a MRP system?