1. (a) List the major milestones of the evolution of computer’s hardware and software. 7%
   (b) Predict the next generation computer features including software and hardware. 8%

2. (a) What is a “process”? 3%
   (b) Draw a diagram of process states and show the transition of states. 7%
   (c) While you design a network system starting from getting frame with packet driver and implementing with TCP/IP protocols, how many processes do you need? And explain their functions. 10%
   (d) How do they (processes) communicate with each other? 5%

3. Please explain why Unix operating system is not so popular. 10%

4. What is called “graphical user interface (GUI)”? Is it important? Why or why not? 10%

5. Please describe the features of three kinds of computer virus: Time bombs, Worm, and Trojan horse. 10%

6. The software development process can be divided into several phases. Please describe the purposes and activities of these phases. 15%

7. Explain the major characteristics of the following data structures: 15%

   (a) List
   (b) Stack
   (c) Queue
   (d) Tree
   (e) Self-defined type --- ‘structure’