

1. What is the computer system? Give some important history-events of the units of a computer system. 10%
2. What are the machine language, the assembly language, and the high-level language? State the conditions in choosing the suitable language for programming. 10%
3. Give the steps from the beginning of programming to the end of computer execution. 15%
4. Explain the structured programming. Give an example to change a non-structured program to an equivalent structured program. 15%
5. Devise a recursive algorithm to solve the Tower of Hanoi problem for  $n$  disks and prove formally that your algorithm is correct. 15%
6. How many kinds of file organization? State the advantages and the dis-advantages for each kind of the file organization. 10%
7. Give the structure of a DBMS(data base management system). 15%
8. What are the zoned decimal and the packed decimal? Why we use these to represent decimal numbers? 10%