

八十五學年度國立台灣工業技術學院研究所碩士班招生考試

所 別：管理技術研究所

學程別：資訊管理學程

組別：

科目：系統程式

1. State the reasons for providing an environment that allows process cooperation. (10%)
2. Access matrix is a famous protection model used in contemporary computer systems. Describe at least four methods for implementing an access matrix. (15%)
3. Describe the basic phases and their functions for a compiler. You should point out and state the reasons for which phases can be designed in machine-independent manner. (15%)
4. What is a linkage editor? (5%)
What is a linking loader? (5%)
5. The instruction *LD operand* will load the contents of the target address into register *A*. The target address is computed from the operand according to which addressing mode is used. Assume that the contents of memory locations 30, 50 and 90 are 90, 90 and 20, respectively. What values will be loaded into register *A* in the following instruction if *immediate*, *direct* and *indirect* addressing modes are used? (12%)

LD 30

6. Describe the disk-space allocation methods used by MS-DOS and UNIX operating systems. (20%)
7. The following is an operator-precedence grammar, where *E*, *T* and *F* are nonterminals and *+*, ***, *(*, *)* and *id* are terminals.
$$E \rightarrow E + T \mid T$$
$$T \rightarrow T * F \mid F$$
$$F \rightarrow (E) \mid id$$

What are the operator-precedence relations between these terminals? (18%)

