

國立中央大學八十五學年度碩士班研究生入學試題卷

所別: 資訊工程研究所 不分組 科目: 系統程式

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- 一. Explain the following terms. (20%)
(a) busy wait Vs blocking (b) dispatcher (c) binding (d) address constant (e) YACC
- 二. Please list the machine-dependent assembler features ? machine-independent assembler features ? machine-dependent loader features ? machine-independent loader features ? (20%)
- 三. Give the object programs of PROGA and PROGC and their load addresses below, respectively.(10%)

PROGA: HPROGA ...

PROGC: HPROGC

T00005A06F00003F ...

DLISTC000030ENDC000042

M00005A06+ENDC

M00005A06-LISTC

M00005A06+PROGA

Load addresses

PROGA 004000

PROGC 0040E2

What is the contents (write out three bytes) of the address 00005A of PROGA in memory when programs PROGA and PROGC are loaded into memory ?

- 四. There are many data structures involved in a macro processor. Please list three main data structures and describe them briefly. What are "macro instructions defining macros" and "macro calls within macros" ? Please give an example to illustrate them, respectively. Does a macro processor need to use stacks when the above macros are invoked ? If yes, please give the organizations of the stacks. (20%)
- 五. What is the convoy effect ? What is Belady's anomaly ? What are the differences between user-level threads and kernel-supported threads ? Under what circumstances is one type "better" than the other ? (20%)
- 六. (a) What is the problem of "direct left-recursive" ? (5%)
(b) Consider the grammar
$$\Lambda \rightarrow Ac \mid Aad \mid bd \mid e$$
Please eliminate left recursion from the above grammar. (5%)

