

國立交通大學試題紙

科目：編輯器設計 (B)

日期：96 年 7 月 27 日 第 1 頁 共 1 頁

請“✓”明 ☐ 不可看書 ☒ 可看書

Given the following grammar,

```

<function-specification>: INT <ident> ( <declarator-list> ) { <declarator-list> <statement-list> }

<declarator-list>: <declarator>;
                  | <declarator> <declarator-list>
                  |

<declarator>: INT <identlist>
              | BOOLEAN <identlist>

<identlist>: <ident>
             | <ident>, <identlist>
             |

<statement-list>: <statement>;
                  | <statement> <statement-list>
                  |

<statement>: <ident> = <expression> ;
              | BLUFF { <b-stmt> }
              |

<b-stmt> <ident>;
         | <ident> <ident>;
         | <ident> <constant>;
         |

<expression>: <ident> + <ident> | <ident> - <ident> | <ident> * <ident>
              | <ident> / <ident> | <ident> <<ident> | <ident> >> <ident>
              | <ident> == <ident>

<ident>: [a-z] <alphanum> | [A-Z] <alphanum>

<alphanum>: [a-z] <alphanum> | [A-Z] <alphanum> | [0-9] <alphanum>
           |

<constant> 0 | 1|2|3 | 4|5|6|7|8|9...|100

```

10% 1) Rewrite the above language grammar if it is not LL(1).

10% 2) Construct the selection set or the look-ahead table for the above LL(1) grammar.

10% 3) For the above language grammar, construct the action table for the LR parser.

10% 4) For the above language grammar, construct the goto table for the LR parser.

10% 5) Are there any ambiguous or errors in the grammar? Please elaborate your answer.