

## Compiler General

### Answer All Questions

1. Define the following terms:

Handle  
Sentential Form  
Regular Grammar  
Terminal Symbol  
Lexical Scan

2. Is it possible that a derivation (construction or syntax tree) exists for a string from a grammar, but a top down parser will reject the string? Explain your answer.

3. What is done during a two pass assembler?

4. Given the grammar:

$E ::= E + E$   
 $E ::= E * E$   
 $E ::= (E)$   
 $E ::= id$

Show how a bottom up parser might operate on  $id * id + id$ .

5. Remove left recursion from  $T ::= TB^5P$

Left factor the rule  $Q ::= AD:AF$

6. Briefly describe what is done during code generation.