5. Give a grammar for the language Time of Day, which accepts strings such as: 12:36 pm 1:59 am 4:00 pm 2:45 am . In general the language has strings with hour times from 1 to 12, followed by a colon, followed by minute times from 00 to 59, and then either am or pm. (Use BNF notation and give good mnemonic names for concepts such as <Time of Day>, which is to be the start symbol, and <Single Hour Digit> for digits that are hour digits, i.e., 1 through 9 but not 0.)	<Time of Day> = <Hour>:<Minutes> <Meridian> <Hour> = <Two Digit Hour>|<One Digit Hour> <Two Digit Hour> = 1<Single Hour> <Single Hour> = 0|1|2|ε <One Digit Hour> = 2|3|4|5|6|7|8|9 <Minutes> = <Tens of Minutes><Single Minutes> <Tens of Minutes> = 0|1|2|3|4|5 <Single Minutes> = 0|1|2|3|4|5|6|7|8|9 <Meridian> = am|pm

6. Letting <S> be the start symbol, convert the following grammar into a 4-tuple as defined below:
 	
``
<S> ::= wc<S>
<S> ::= {<L>}
<S> ::= s;
<L> ::= <L><S>
<L> ::= ε
``
 	
    A *context-free grammar with epsilon* G is a 4-tuple:
 	
    $G = (V_N, V_T, S, \Phi)$, where:
    − V_N is a set of non-terminal symbols
    − V_T is a set of terminal symbols
    − $S \in V_N$ is a start symbol
 	
− Φ is a finite relation from V_N to
      $(V_T \cup V_N)^+ \cup \{\varepsilon\}.$
 	
Consider the terminal symbols to be individual characters—not character sequences. The symbol ε is a meta-symbol denoting the empty sequence; it is not a terminal symbol.
 	
Note: ';', '{', and '}' are all terminal characters	