Name: _____

1. (1 pt.)
   - **Read all material carefully.**
   - *If in doubt whether something is allowed, ask, don't assume.*
   - You may refer to your books, papers, and notes during this test.
   - E-books may be used.
   - Computers are permitted but discouraged.
   - **Electronic and network resources must only be used as a passive library.**
   - Write, and draw, carefully. Ambiguous or cryptic answers receive zero credit.
   - Use class and textbook conventions for notation, algorithmic options, etc.

   Write your name in the space provided above.

   Do not write anything else on this page.

WAIT UNTIL INSTRUCTED TO CONTINUE TO REMAINING QUESTIONS.

   (Do not view any other pages.)

Q	Full	Score	Topic/comment/notes
1	1		don't forget to write your name (only, no ID num.)
2	3		very short answers; JCoCo virtual machine architecture
3	3		very short answers; JCoCo VM and instructions
4	3		about CFG defining regular expressions (textbook p. 40). This grammar is used by several other questions too, so study it well!
5	2		very short answer related to above
6	3		short CFG derivation of a sentence
7	5		longer CFG derivation of a sentence
8	5		parse tree
9	5		abstract syntax tree
10	10		another derivation/parse-tree
11	5		another abstract syntax tree
total	45		