

1. Consider the grammar G where $N = \{S, B\}$, $\Sigma = \{a, b, c\}$, S is the start symbol and P consists of the following production rules: 1. $S \rightarrow aBSc$; 2. $S \rightarrow abc$; 3. $Ba \rightarrow aB$; 4. $Bb \rightarrow bb$. The grammar defines the language _____.

$L(G) = \{anbnc^n \mid n \geq 0\}$

2. _____ is a finite non-empty set of indivisible symbols.
vocabulary

3. Let the alphabet Σ be the standard 26 letters $\{a, b, \dots, y, z\}$. If $A = \{\text{good, bad}\}$ and $B = \{\text{boy, girl}\}$, then $A \cup B$ is _____.
 $\{\text{good, bad, boy, girl}\}$

4. In a nondeterministic machine _____, choices may exist for the next state at any point.
several

5. A formal language can be given as the following EXCEPT:
strings generated by a compiler.

6. Typical questions asked about a formal language the following EXCEPT:
what is their understandability?

7. A formal language is a set of _____.
words

8. Type 2 of the Chomsky hierarchy denotes _____.
context-free language

9. The set of all words over an alphabet Σ is usually denoted by _____.
 Σ^*

10. Every state of a Deterministic Finite Automata has exactly _____ existing transition arrow for each symbol in the alphabet.
one