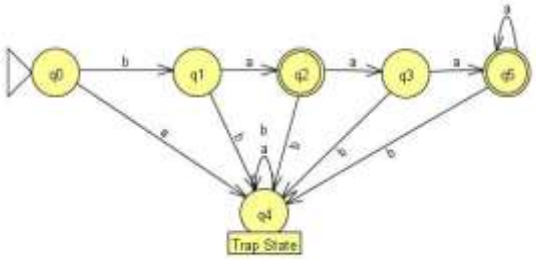
Quiz + Solution

1 T
2 T
3 F
4 T
5 T
6 F
7 E
8 C
9 T
10 F
11 D
12 D
13 C
14 A, B, C, D
15 A, B, C
16 A
17 B, C
18 B, C, D
19 A, C, D
20 C
21 A, B, C
22 D
23 A, B, C
24 B
25 A, B
26 A, B
27 E
28 B, C
29 Formal languages, Automata theory, Computability, Complexity
30 Because the number of states should be finite.
31 Nondeterministic Finite Automata
32 A set whose size is a natural number.
33 A function that all of its domain elements are defined.
34 Any subset of $\sum^*$
35 The set of all strings that it accepts
36 When they have the same associated language.
OR
L(M1) = L(M2).
37 The sequence of configurations from when the machine starts until it halts.
38 They have one and only one outgoing transition for every symbol of alphabet.
39 A machine is called deterministic if during any timeframe, there is no more than one possible transition.
40 $\{(q_0, a), (q_0, b), (q_0, \lambda), (q_1, a), (q_1, b), (q_1, \lambda)\}$
41 a. $L = \{b^n a b^m a w : n \geq 0 , m \geq 0 , w \in \sum^*\}$
b. $\bar{L} = \{b^n : n \geq 0\} \cup \{b^n a b^m : n \geq 0 , m \geq 0\}$
42
a. $L = \{(ba)^* : n \geq 0\}$
b. Convert accepting states to regular states and vice-versa
43



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