

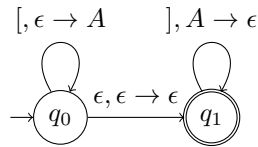
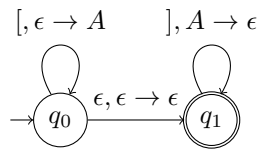
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## QUIZ 8-1

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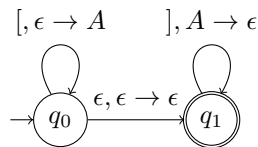
1. Consider the PDA  $P = (Q = \{q_0, q_1\}, \Sigma = \{[, ]\}, \Gamma = \{A\}, q_0, F = \{q_1\}, \delta)$  shown below. Suppose the current instantaneous description is  $\langle q_1, AAAAAA \rangle$  and the unread portion of input is  $]]$ . The instantaneous description after *one* step is

- (A) The machine crashes.
- (B)  $\langle q_1, AAAAAA \rangle$
- (C)  $\langle q_1, AAAA \rangle$
- (D)  $\langle q_0, AAAA \rangle$



2. Consider the PDA  $P = (Q = \{q_0, q_1\}, \Sigma = \{[, ]\}, \Gamma = \{A\}, q_0, F = \{q_1\}, \delta)$  shown above. Which of the following strings is accepted by  $P$ ?

- (A)  $[[[]]$
- (B)  $[[[]]]$
- (C)  $[[[]]]$
- (D) None, because  $P$  does not push a symbol onto the stack *before* processing any input symbols.



3. Consider the PDA  $P = (Q = \{q_0, q_1\}, \Sigma = \{[, ]\}, \Gamma = \{A\}, q_0, F = \{q_1\}, \delta)$  shown above.  $L(P)$  is

- (A)  $\{[n]^n \mid n \geq 0\}$
- (B)  $\{w \in \{[, ]\}^* \mid w \text{ is a string of well-matched parenthesis}\}$
- (C)  $\{[i]^j \mid i \geq j \geq 0\}$
- (D)  $\emptyset$