Quiz 1

1. If L is a finite language, then every subset of L is regular.

   (a) True

   (b) False

2. Which of the following is correct?

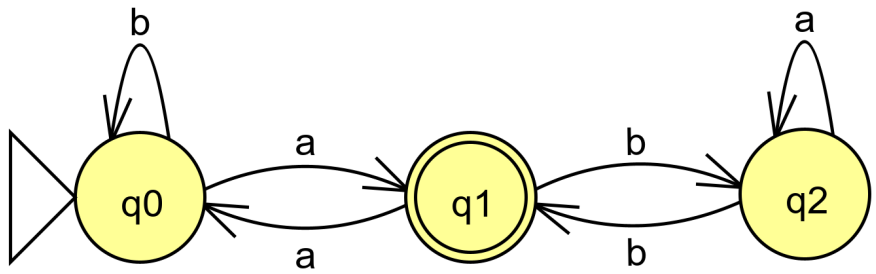
(a) λ is in ϕ (Note: $\phi = \{\}$)

(b) λ is in ϕ^*

(c) λ is in ϕ^+

(d) All of the above

3. Which of the following strings is accepted by this DFA?



(a) $ababa$

(b) $aaaba$

(c) $babab$

(d) $abbba$

4. The language L defined as follows is regular.

$$L = \{a^n b^n : n \geq 19092019\} \cup \{a^n b^m : m, n \geq 0\}$$

(a) True

(b) False

5. The languages $L_1 = \{1, 10\}^*$ and $L_2 = \{1, 10, 101\}^*$ are the same. That is, $L_1 = L_2$.

   (a) True

   (b) False