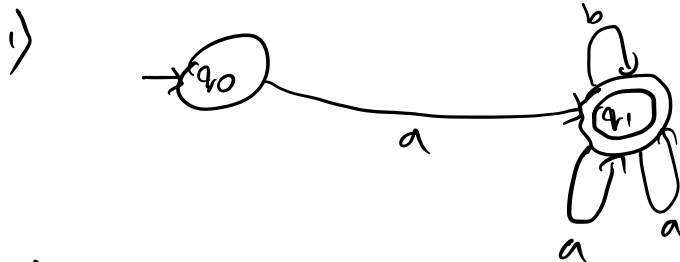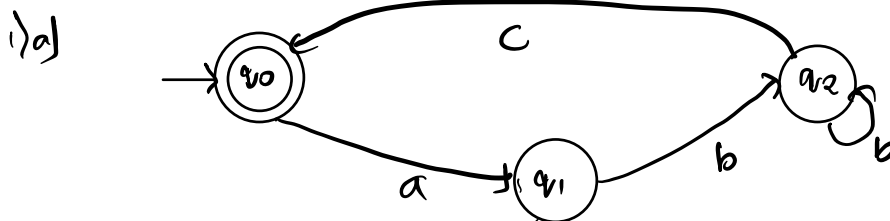$Q_1 \Rightarrow$

$A_1 = (\{a,b\}, \{q_0, q_1\}, \{(q_0, a, q_1), (q_1, a, q_1), (q_1, b, q_1)$,
$, q_0, \{q_1\})$

i)

i) b) $aa \to$ accepted $\qquad ba \to$ not accepted

$Q_2 \Rightarrow$

$A_2 = (\{a,b,c\}, \{q_0, q_1, q_2\}, \{(q_0, a, q_1), (q_1, b, q_2)$,
$(q_2, b, q_2), \qquad\qquad (q_2, c, q_0)\}, q_0,$
$\{q_0\})$

i) a)

b) $abbc \to$ accepted $\qquad\qquad cab \to$ not accepted

$\varepsilon \to$ accepted

c) $\{ w^* \mid w = abb^*c \}$

$Q_3 \Rightarrow$

i)

$A_3 = (\{a,b\}, \{q_0, q_1, q_2\}, \{(q_0, a, q_0), (q_0, b, q_0)$,

$(q_0, b, q_1), (q_1, a, q_2)\}$ $q_0, \{q_1\}$)

2) ab, aab, abb → accepted

bba, aba, bbba → Not accepted

3) Yes it is accepted

$(q_0, b, q_0), (q_0, b, q_0), (q_0, b, q_1)$

4) $\{ w \mid w = a^* b^* b \}$