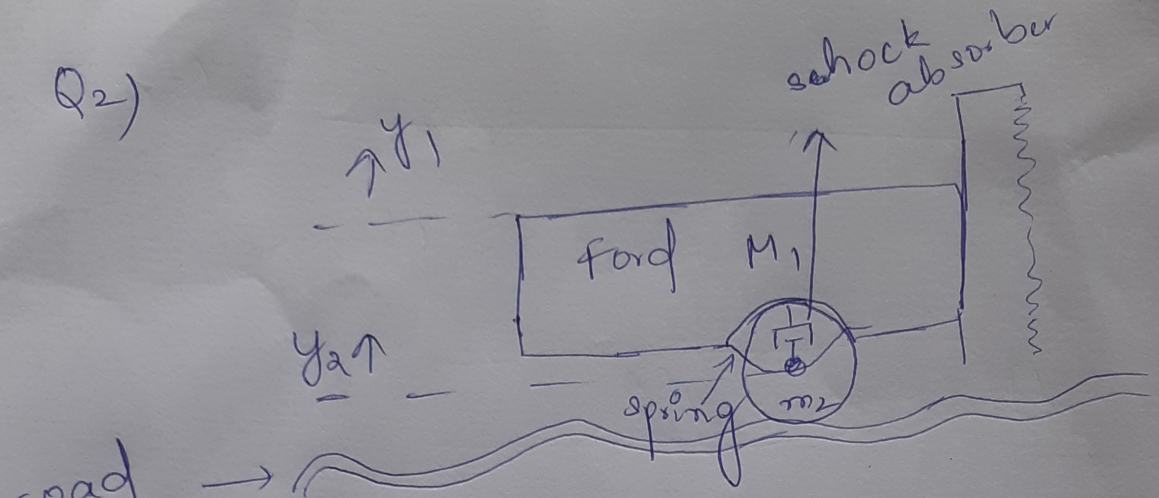
Q2)

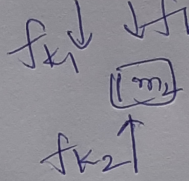


Free body for m_1

$$-k_1(y_1-y_2) - b(\dot{y}_1-\dot{y}_2) = m_1\ddot{y}_1$$

$$\therefore \ddot{y}_1 = \frac{1}{m_1}(-k_1(y_1-y_2) - b(\dot{y}_1-\dot{y}_2))$$

Free body for m_2



$$+k_1(y_1-y_2) + b(\dot{y}_1-\dot{y}_2) - k_2(y_2-y(t)) = m_2\ddot{y}_2$$

$$\ddot{y}_2 = \frac{1}{m_2}(k_1(y_1-y_2) + b(\dot{y}_1-\dot{y}_2) - k_2(y_2-y(t)))$$

The value of m_1, m_2, k_1, k_2 & b are adjusted.