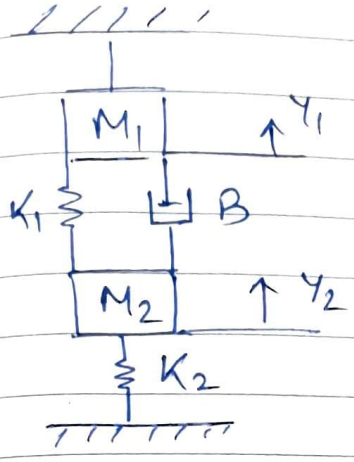
WEEK-1 / QUESTION-2



Ordinary Differential Equations.

for M_1

$$\Rightarrow M_1 \frac{d^2y_1}{dt^2} + B\frac{d(y_1-y_2)}{dt} + K_1(y_1-y_2) = 0$$

for M_2

$$\Rightarrow M_2 \frac{d^2y_2}{dt^2} + B\frac{d}{dt}(y_2-y_1) + K_1(y_2-y_1) + K_2 y_2 = F(t)$$

(1) $M_1 \ddot{y}_1 = -B(\dot{y}_1-\dot{y}_2) - K_1(y_1-y_2)$

(2) $M_2 \ddot{y}_2 = F(t) - B(\dot{y}_2-\dot{y}_1) - K_1(y_2-y_1) - K_2 y_2$