Question 2

1)
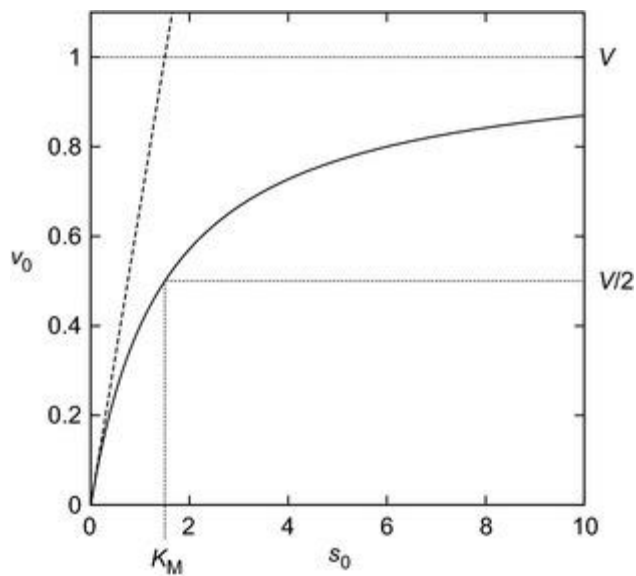
$$\frac{d[E]}{dt} = k_2[ES] + k_3[ES] - k_1[E][S]$$

$$\frac{d[S]}{dt} = k_2[ES] - k_1[E][S]$$

$$\frac{d[ES]}{dt} = k_1[E][S] - k_2[ES] - k_3[ES]$$

$$\frac{d[P]}{dt} = k_3[ES]$$

(2) In codes

3)

$V_{max}= 0.5$