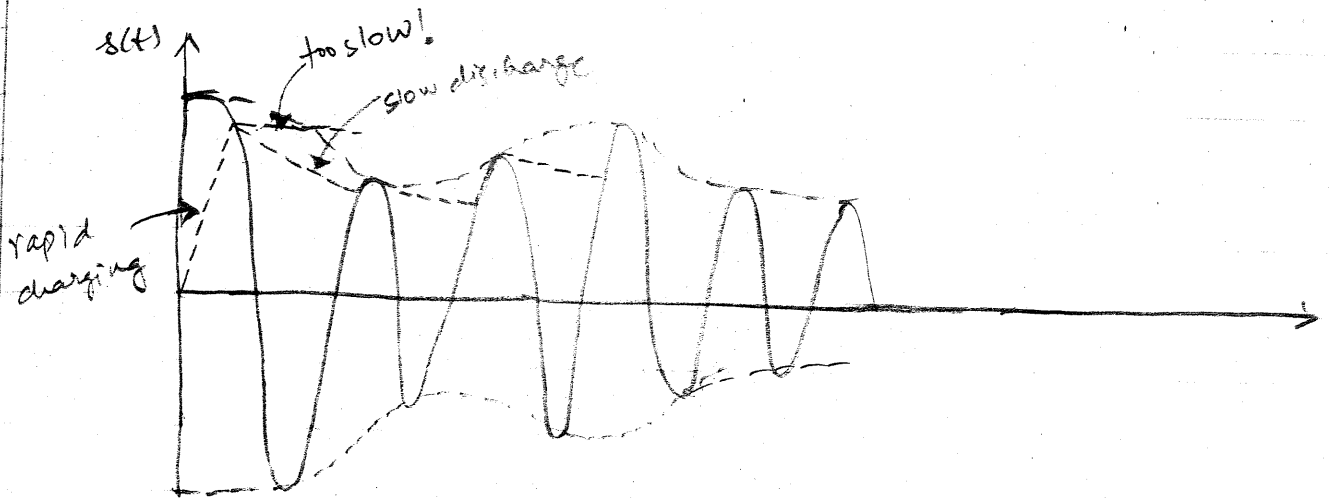
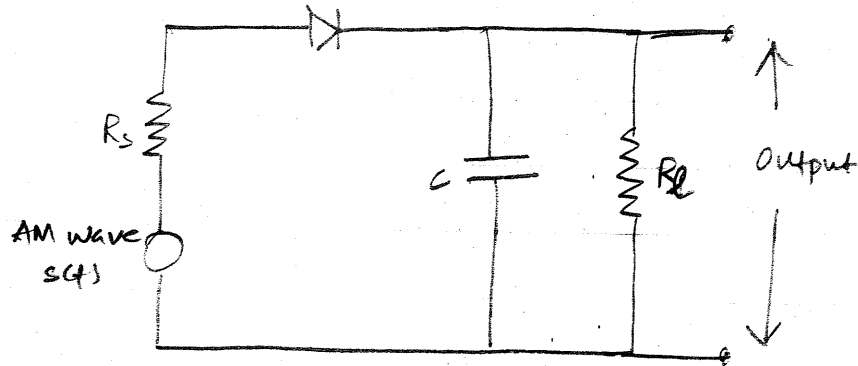


* HW 4 Solutions *

2.5

Envelope detector:



① For rapid charging: the charging time constant

$$R_s C \ll \frac{1}{f_c}$$

② For slow discharge: the time constant

$$R_L C \gg \frac{1}{f_c}$$

③ On the other hand, discharge must follow rate of change of modulating wave.

$$R_L C \ll \frac{1}{W} \leftarrow \text{rate of change of message signal.}$$