Consider the op-amp relaxation oscillator shown below.



Depending on the voltage  $V_C$ , the output  $V_{out}$  has the value  $+V_{CC}$  or  $-V_{CC}$ .

- (a) If  $V_{out} = +V_{CC}$  what are the possible values of  $V_C$ ?
- (b) If  $V_{out} = -V_{CC}$  what are the possible values of  $V_C$ ?
- (c) Determine  $V_C$  as a function of time.
- (d) Find the period of the oscillator. What is its waveform?