

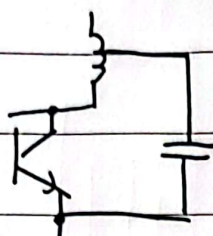
7.10. (a) 能

(b) 不能

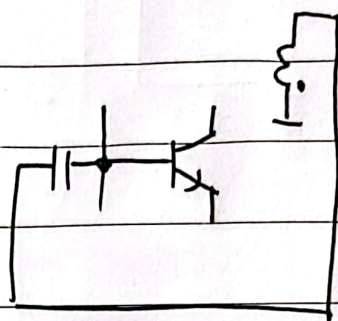
(c) 不能

(d) 能

7.11. (b)



(c)



7.12. (a) 失真: L_C

正反馈: R_W, C_2, R_3

负反馈: L_C

能

(b) 失真: L, C_2

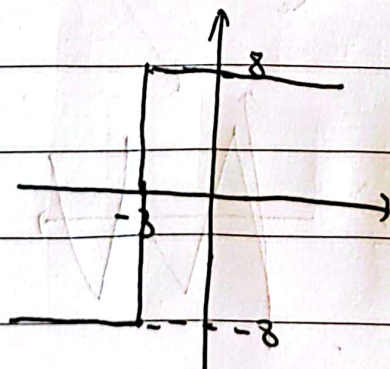
正反馈 L, C_2, R_4

负反馈: R_8

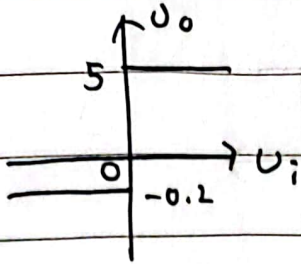
能

7.13 (a) $U_P = 3 \cdot \frac{1}{2} + u_1 \cdot \frac{1}{2} = \frac{1}{2}(3 + u_1)$, $U_T = -3V$

$U_O = \pm U_Z = \pm 8V$

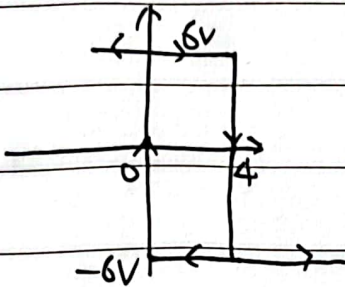


(b) $U_T = 0V$, $U_{OH} = 5V$, $U_{OL} = -0.2V$

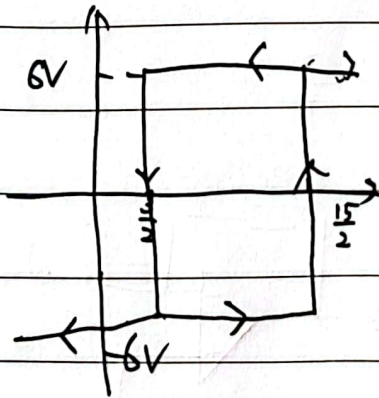


(c) $U_p = U_o \cdot \frac{R_1}{R_1 + R_2} + 3 \cdot \frac{R_2}{R_1 + R_2} = \frac{1}{3}U_o + 2$

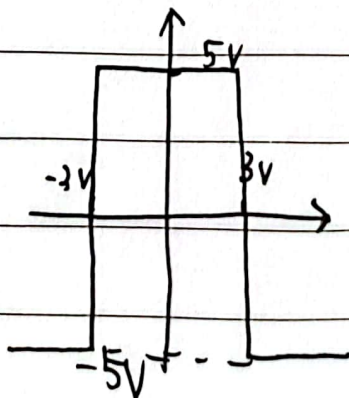
$U_o = \pm 6V$



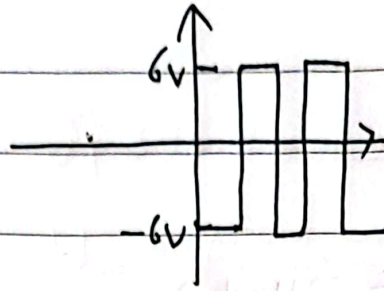
(d) $U_p = U_o \cdot \frac{1}{3} + U_1 \cdot \frac{2}{3}$, $U_o = \pm 6V$



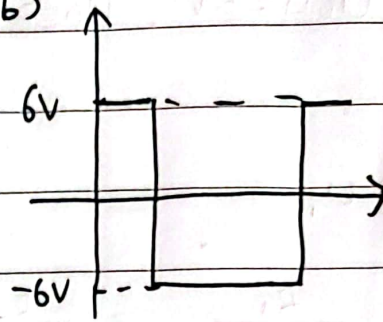
(e) $U_o = \pm 5V$



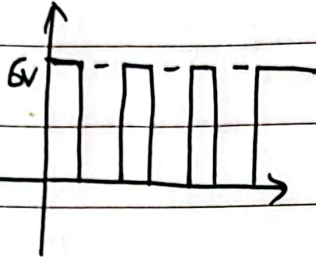
7-14. (a) uoi



(b)



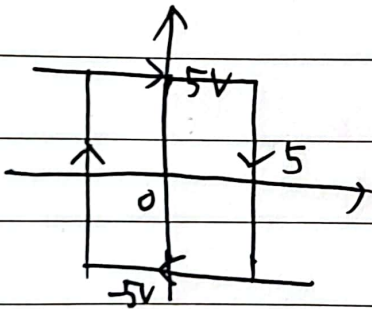
(c)



7-15 (b) ~~过零比较器~~ 滞回比较器

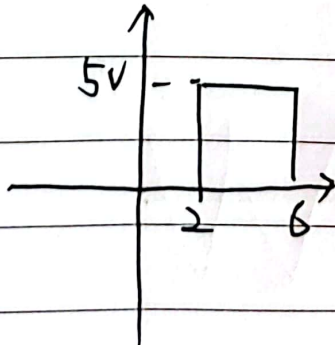
~~2: + 3: - uo3: -~~

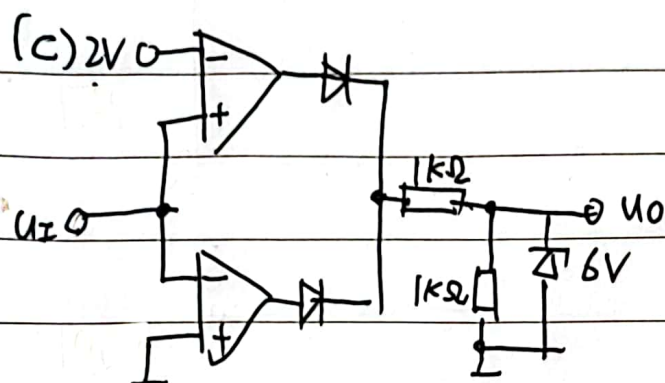
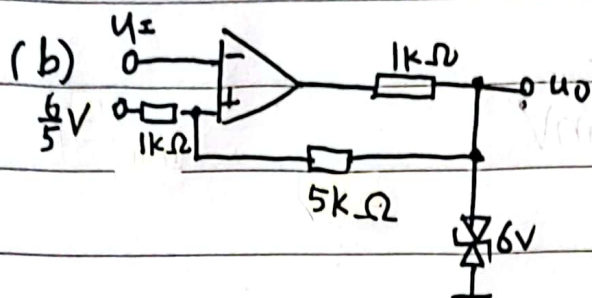
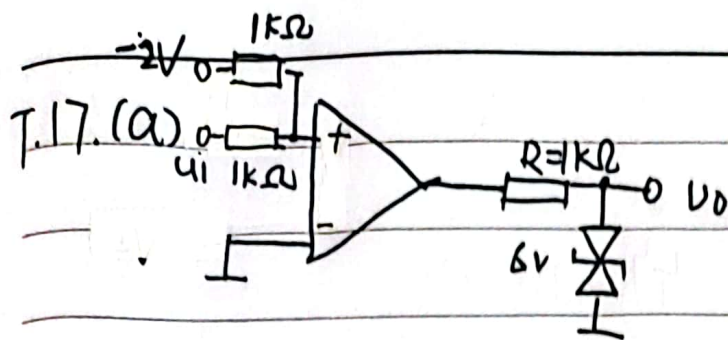
2: - 3: +



(c) 窗口比较器

2: + 3: -





7-20. ②, ①, ③; ② ① ②; ① ② ②

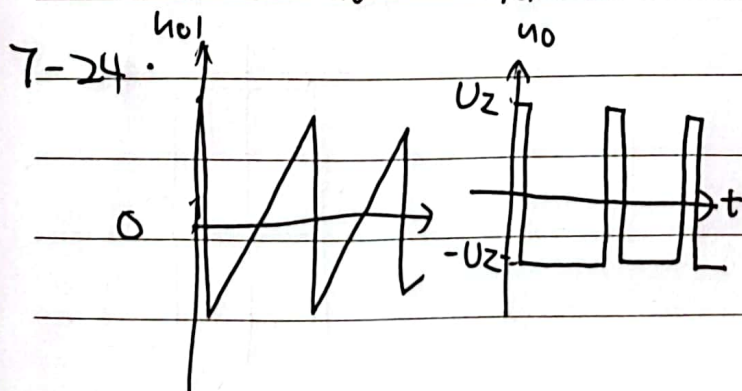
7-22. 温度 \rightarrow 温度传感器 \rightarrow 放大电路 \rightarrow 压控振荡器 \rightarrow 频率计

电压信号 \rightarrow 放大电路 \rightarrow 交流直流转换 \rightarrow 压控振荡器 \rightarrow 频率计

外加信号 \rightarrow 电容 \rightarrow 响应信号 \rightarrow 转换为直流 \rightarrow 压控振荡器 \rightarrow 频率计

7-23. $u_1 > 0: u_o = u_1, u_1 < 0: u_o = -u_1 = -u_1$

b. $u_1 > 0: u_o = \frac{R_L}{R_1} \cdot u_1, u_1 < 0: u_o = -\frac{R_L}{R_1} u_1$



$$f \approx \frac{R_5}{2R_4R_1CU_Z} |u_1| = 62.5 |u_1|$$

