1908 1120193582 张子凡 模电第十章

10. 1. 不能确定，因为不接R，R_2中电流可能超过Z的最大电流

2. $U_{1max} = 1.1 \times 1.2 \times U_2 = 19.8V$

$$\frac{U_{1max} - U_0}{R} - I_{Omin} < I_{Zmax}$$

$R > 363\Omega$

$U_{1min} = 0.9 \times 1.2 \times U_2 = 16.2V$

$$\frac{U_{1min} - U_0}{R} - I_{Omax} > I_{Zmin}$$

$R < 680\Omega$

R取500Ω

11. 1. $U_1 = 1.2U_2$ $U_2 = 20V$

2. $U_{BE} = 0.7V$ $U_2 = 5.3V$ $U_{B2} = 6V$

$$U_O = U_{B2} \cdot \frac{R_3 + R_P + R_4}{R_4 + R_{RP}}$$

$9V < U_O < 18V$

3. $U_{Omax}' = U_{B2} \cdot \frac{R_3 + R_P + R_4}{R_4} = 24V$

$U_{Omax}' > U_1 - U_{CES1} = 22V$

$\therefore U_{Omax} = 22V$

19. 1. W7815 15V

$$U_O = (U_{13} + U_{EB}) \cdot \frac{R_1 + RP + R_3}{R_1 + RP} = 15.2 \times \frac{3.5}{1 + RP}$$

$17.7V \leq U \leq 53.2V$