

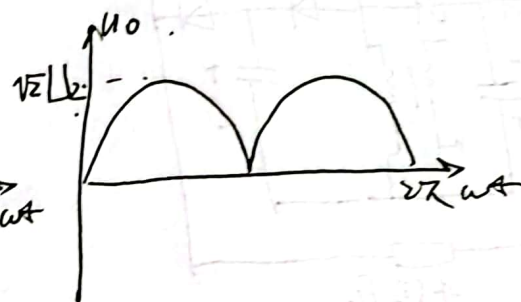
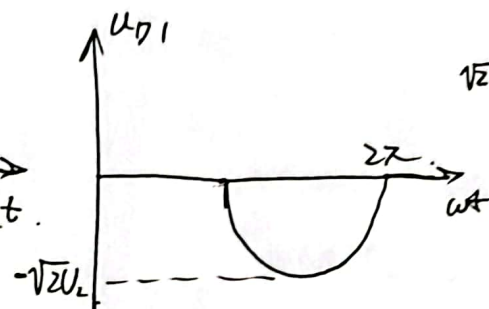
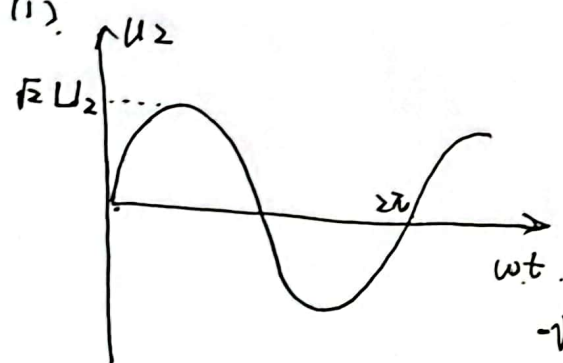
编号: 模电 H15.

班级:

姓名:

9.6

(1).



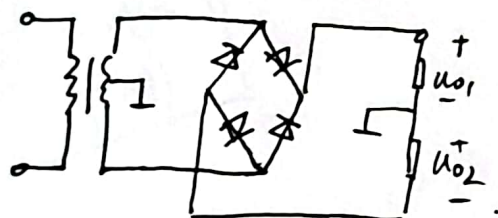
$$(2). U_{OAV} = \frac{1}{\pi} \int_0^{\pi} \sqrt{2} U_2 \sin \theta d\theta = \frac{2\sqrt{2}}{\pi} U_2$$

$$I_{L(AV)} = \frac{U_{OAV}}{R} = \frac{2\sqrt{2}}{\pi} \frac{U_2}{R}$$

$$(3). I_D(AV) = \frac{1}{2} I_{L(AV)} = \frac{\sqrt{2}}{\pi} \frac{U_2}{R}$$

$$U_{kmax} = 2 \times \sqrt{2} U_2 = 2\sqrt{2} U_2$$

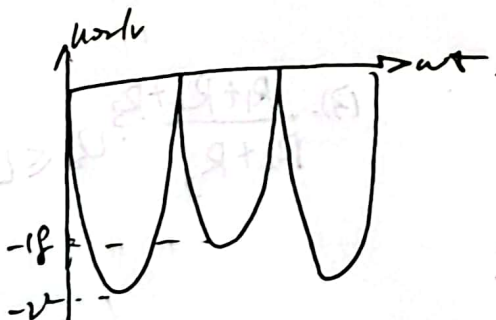
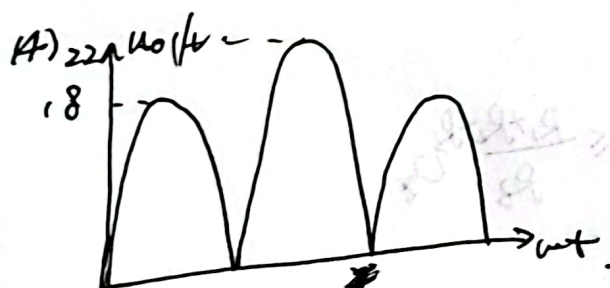
9.8. (1).



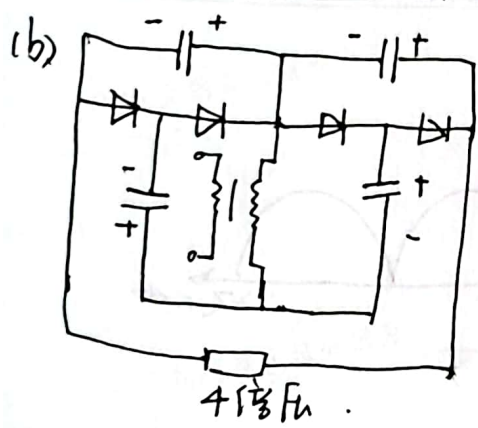
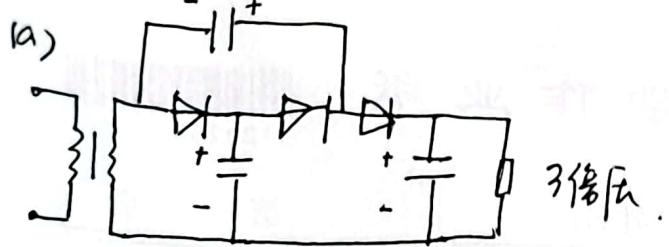
(2). 全波整流.

$$(3). U_{O1(AV)} = \frac{2\sqrt{2}}{\pi} U_2 \approx 18V$$

$$U_{O2(AV)} = -\frac{2\sqrt{2}}{\pi} U_2 \approx -18V$$



9.10.



9.11.

(1) $I_{Zmax} = \frac{P_{Zm}}{U_Z} = 40mA$. $I_L = \frac{U_Z}{R_L} = 10 \sim 30mA$.

$R_{max} = \frac{U_{Lmin} - U_Z}{I_Z + I_{Lmax}} = \frac{20 - 6}{5 + 30} = 400\Omega$.

$R_{min} = \frac{U_{Lmax} - U_Z}{I_{Zmax} + I_{Lmin}} = \frac{24 - 6}{40 + 10} = 360\Omega$.

(2) $S_r \approx \frac{r_U}{R} \frac{U}{U_Z} = \frac{15}{390} \cdot \frac{2K}{6} \approx 0.15$.

9.12.

(1) $U_{CE} = 0$. T 和 C 短路.

(2) R_C 短路.

(3) R_2 短路.

(4) T 的 b, c 短路.

(5) R_1 短路.

9.15 电流: $D_1 \sim D_4$.

调整管: C_1 .

调整管: T, T_2 .

基准电压电路: D_5, R_1, R_2, R_3 .

比较放大: A .

采样: R_1, R_2, R_3 .

(2) 上“-”下“+”.

(3) $\frac{R_1 + R_2 + R_3}{R_2 + R_3} U_Z \leq U_o \leq \frac{R_1 + R_2 + R_3}{R_3} U_Z$



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9.13

$$1) \frac{R_1+R_2+R_3}{R_2+R_3} U_D \leq U_0 \leq \frac{R_1+R_2+R_3}{R_3} U_D. \quad U_D = U_Z + U_{BE} = 5V.$$

$$7.5V \leq U_0 \leq 15V.$$

$$2) I = \frac{U_{BE}}{R_0} = 0.14A.$$

$$3) U_{Cmax} = 25 \times 1.1 - 7.5 = 20V.$$

$$P_{max} \approx I \cdot U_{Cmax} = 2.8W$$

9.18

$$1) \frac{R_3+R_4+R_5}{R_3+R_4} U_R \leq U_0 \leq \frac{R_3+R_4+R_5}{R_3} U_R.$$

$$2) U_0 = U_Z + U_{REF}.$$

$$3) U_0 = U_{REF} - \frac{R_2'}{R_2} U_Z$$

9.20

