

國立澎湖科技大學
九十九學年度研究所入學考試試題

科目：電子電路學

—作答注意事項—

考試時間：100 分鐘

作答方式：請用黑色或藍色筆在「答案卷」上作答

祝考試順利

科目：電子電路學

1. Determine the peak value of the output voltage for Fig.1 if the turns ratio is 0.5. (20%)
2. Determine the output voltage for each zener limiting circuit in Fig.2. (20%)
3. Determine I_B , I_C , I_E , V_{BE} , V_{CE} and V_{CB} in the circuit of Fig.3. The transistor has a $\beta_{DC} = 150$. (20%)
4. Determine V_{CE} and I_C in the stiff voltage-divider biased transistor circuit of Fig.4, if $\beta_{DC} = 100$. (20%)
5. For the JFET in Fig.5, $V_{GS(OFF)} = -4\text{ V}$ and $I_{DSS} = 12\text{ mA}$. Determine the minimum value of V_{DD} required to put the device in the constant-current region of operation when $V_{GS} = 0\text{ V}$. (20%)

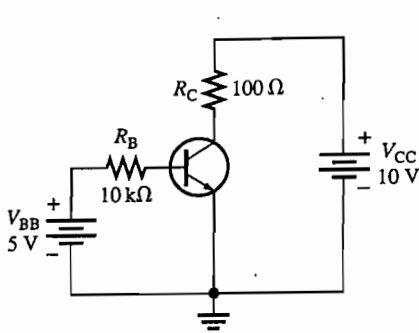
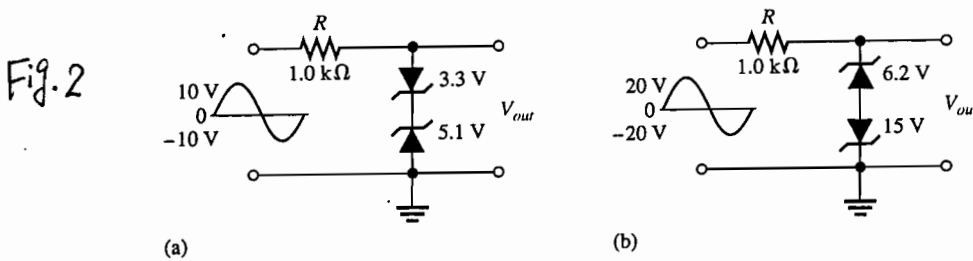
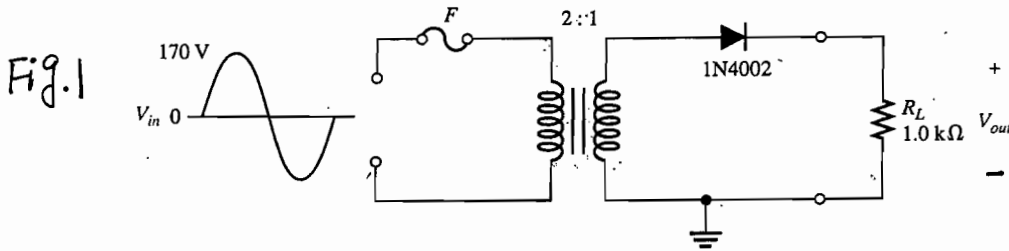


Fig.3

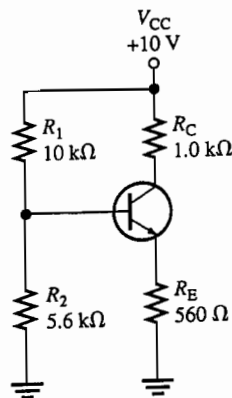


Fig.4

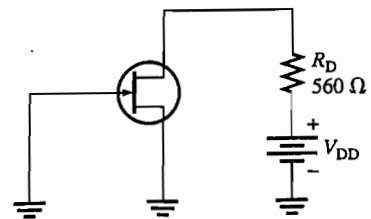


Fig.5