

國立臺北科技大學 111 學年度碩士班招生考試

系所組別：1111 機械工程系機電整合碩士班甲組

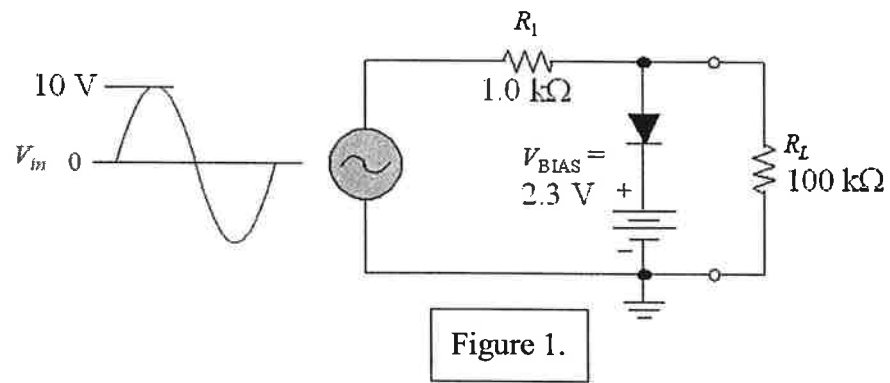
第二節 電子學 試題 (選考)

第 1 頁 共 2 頁

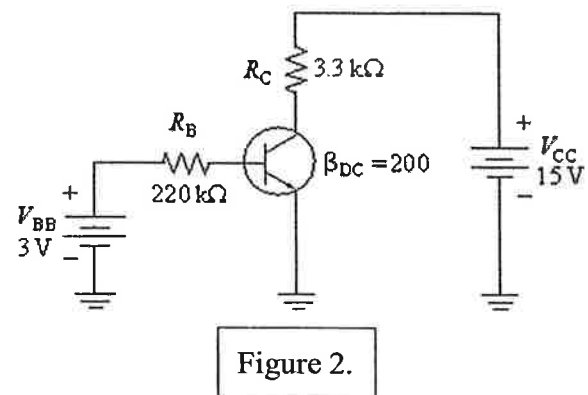
注意事項：

1. 本試題共 5 題，每題 20 分，共 100 分。
2. 不必抄題，作答時請將試題題號及答案依照順序寫在答案卷上。
3. 全部答案均須在答案卷之答案欄內作答，否則不予計分。

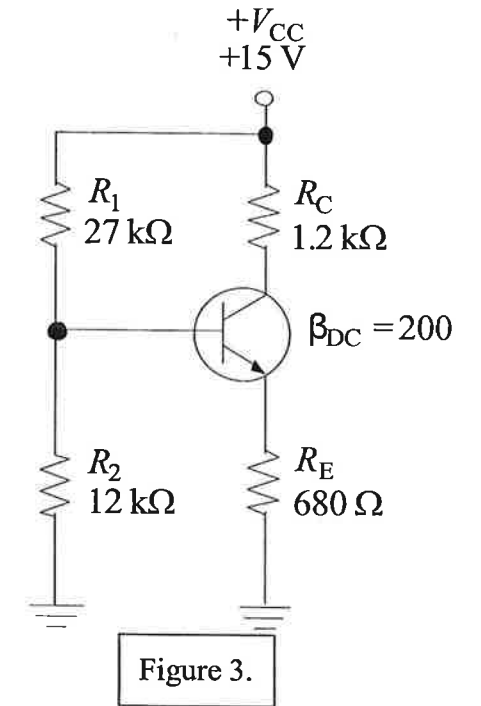
1. What is the output of positive limiter shown in the Figure 1? (20%)



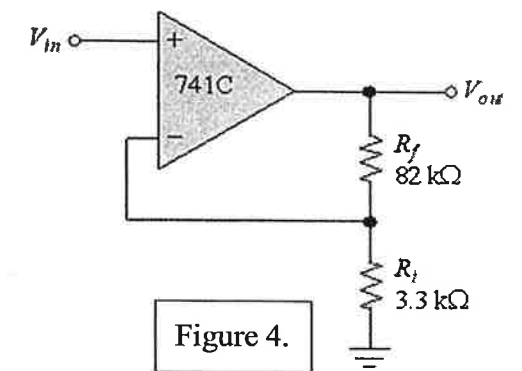
2. What are the saturation current and the cutoff voltage for the circuit in the Figure 2? (10%)
Assume $V_{CE} = 0.2\text{ V}$ in saturation. Is the transistor saturated? Please explain it. (10%)



3. What is the emitter voltage, V_E , and current, I_E in the Figure 3? (20%)



4. The 741C op amp is 1MHz in the Figure 4. What is the BW_{cl} for the amplifier? (20%)



注意：背面尚有試題

5. What are the trigger points for the circuit if the maximum output is $\pm 13\text{ V}$? (20%)

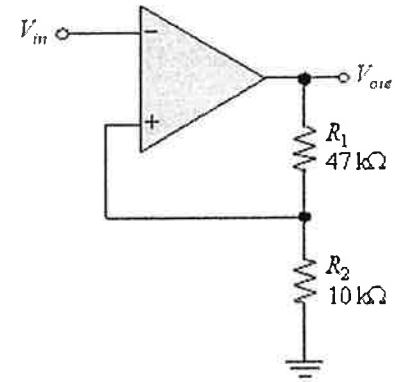


Figure 5.