銘傳大學 96 學年度轉學生招生考試

電子工程學系

7 月 26 日第四節

電子學試題

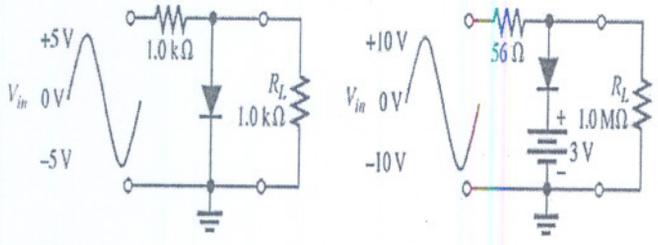
（第 1 頁共 2 頁）

（限用答案本作答）

☑可使用計算機

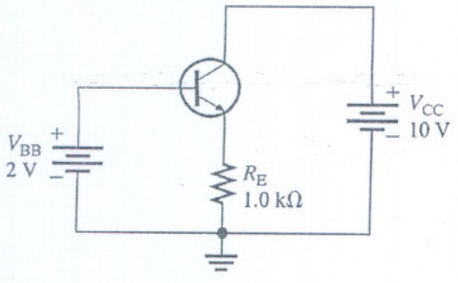
☐不可使用計算機

1. (10) Drawing the R_L waveform for each circuit. (Assume voltage drop is 0.7 when diode foreword bias.

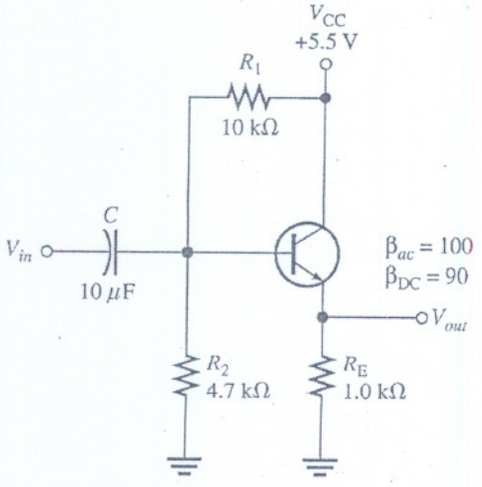


(a) (b)

2. (20%) Find I_B=? I_C=? I_E=? V_{CE}=? α=0.98, $\alpha = \frac{\beta}{1+\beta}$



3. (20%) Find $R_{in(tot)}$=_____; A_v=_____;



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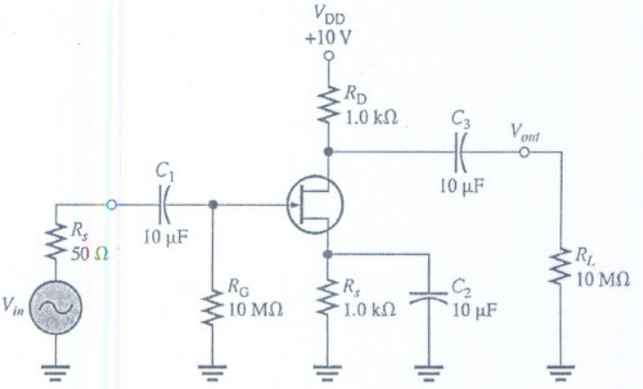
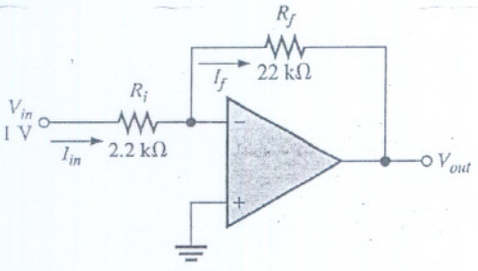
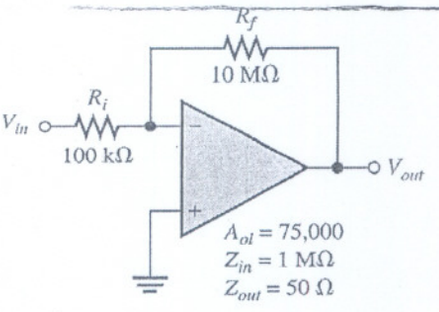
4. (20%) For the value C_{iss}=8pF, C_{rss}=3pF, and g_m=6500μS,
   (1) the voltage gain at midrange
   (2) the input critical frequency of internal capacitance
   (3) the output critical frequency of internal capacitance
   (4) show the high frequency response of the amplifier with Bode plot



5. (10%) Determine the V_{out} of the figures .

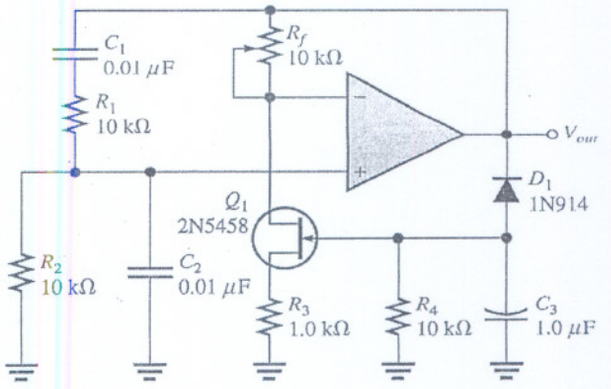


(a)



(b)

6. (20%) Determine the resonant frequency for the Wien-bridge oscillator. And calculate the setting for R_f assuming the internal drain-source resistance, r_{ds}' of the JFET is 500Ω when oscillator are stable.



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