

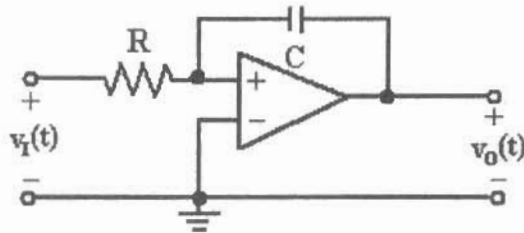
義守大學 94 學年度二年制在職專班考試試題

系列	電子工程學系 二年制在職專班	考試日期	94/6/25
考試科目	電子電路	總頁數	2

※此為試題卷，請將答案填寫在答案卷內，未寫於答案卷內者，不予計分。

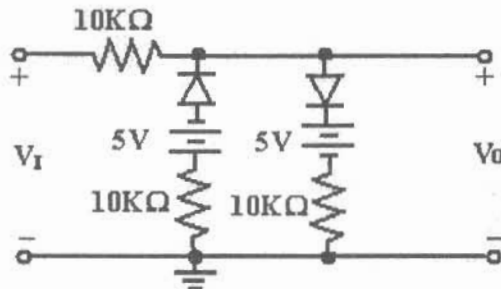
※不可使用計算機

1.

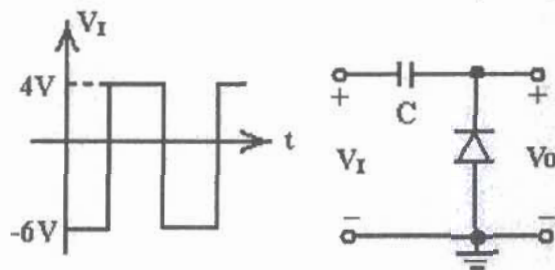


- (a) What is the function of the circuit? (10%)
- (b) Derive the relationship between the input signal $v_i(t)$ and the output signal $v_o(t)$. (15%)

2. Assuming the diodes to be ideal, draw the transfer characteristic of the circuit shown (i.e. v_o vs. v_i). (20%)



3. The circuit shown is a dc restorer with no load. If a square-wave input signal is applied to the circuit, draw the waveform of the output signal. (15%)



4. Depending on the bias condition (forward or reverse) of each of the emitter-base junction (EBJ) and the collector-base junction (CBJ), different modes of operation of the BJT are obtained. Fill in the space of the following table. (10%)

Mode	EBJ	CBJ
Cutoff	(a)	
Active	(b)	
saturation	forward	forward

義守大學 94 學年度二年制在職專班考試試題

系列	電子工程學系 二年制在職專班	考試日期	94/6/25
考試科目	電子電路	總頁數	2

※此為試題卷，請將答案填寫在答案卷內，未寫於答案卷內者，不予計分。

※不可使用計算機

5. Common-emitter amplifier

- (a) Determine the quiescent operating points (i.e. I_{BQ} , I_{CQ} , and V_{CQ}) of the amplifier. (10%)
- (b) Determine the small-signal voltage gain of the amplifier. (20%)

