

Electronic Circuits – Assignment

04

Diodes applications II

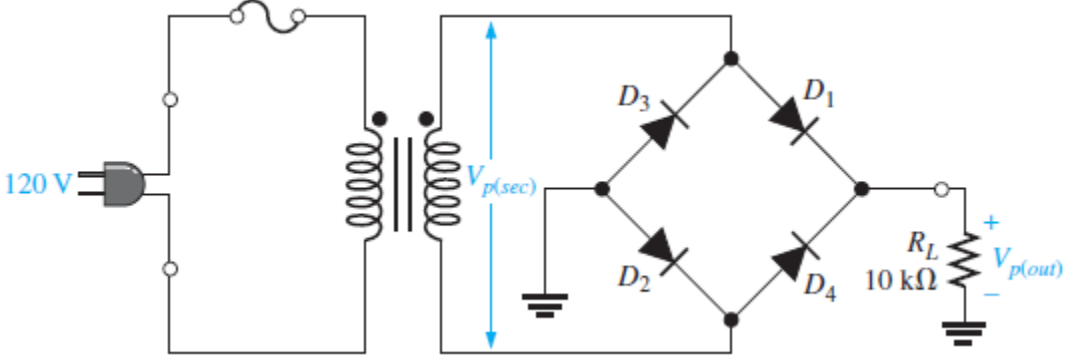
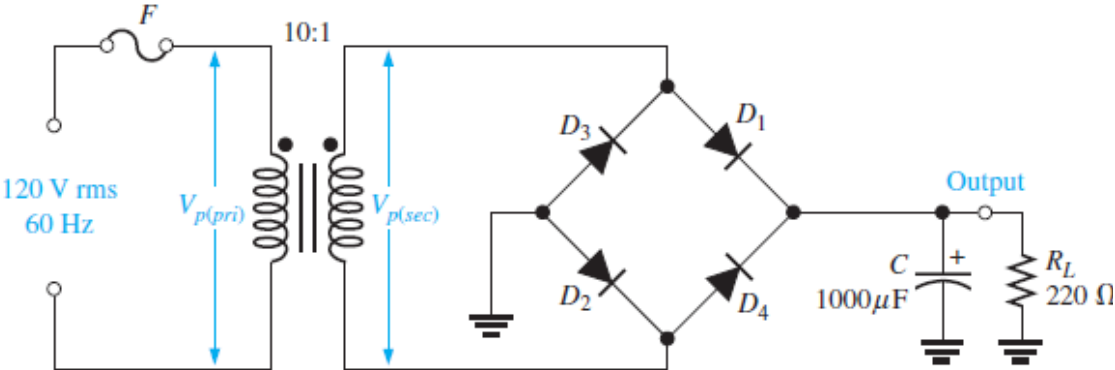
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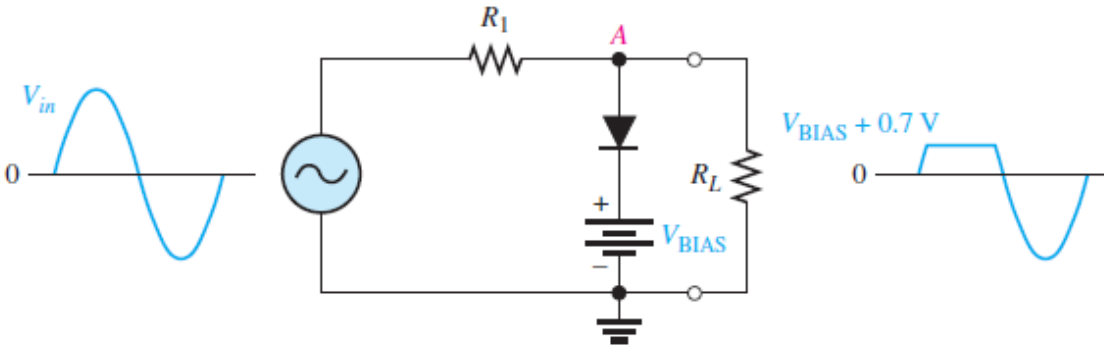
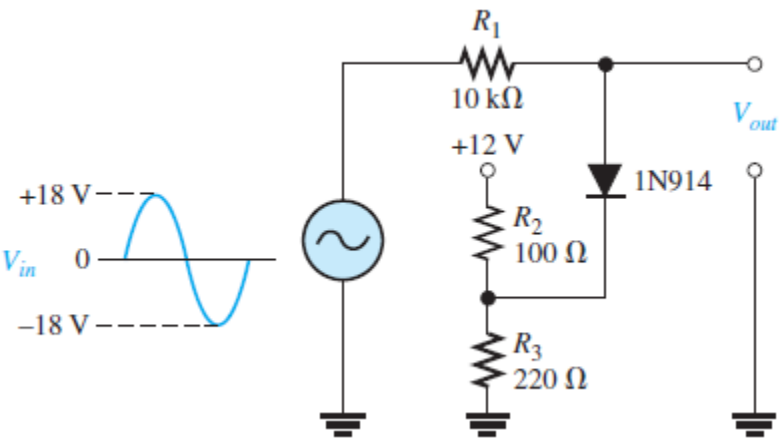
١. يتم تسليم التمرين محلولا في خلال أسبوع من تاريخ التمرين، و يتم حذف درجتين من التمرين عن كل أسبوع تأخير
٢. يتم التسليم لمعيد المقرر مباشرة
٣. تتم أجابه التمرين في نفس ورق الأسئلة

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1	A bridge rectifier uses four diodes.	T
2	The purpose of the capacitor filter in a rectifier is to convert ac to dc.	F
3	A smaller filter capacitor reduces the ripple.	F
4	A diode limiter is also known as a clipper.	T
5	Voltage multipliers use diodes and capacitors.	T

MCQ

#	Question	
1	<p>If one of the diodes in Figure opens, the average voltage to the load will</p>  <p>(a) increase (b) decrease (c) not change</p>	b
2	<p>If the capacitor value in Figure is decreased, the output ripple voltage will</p>  <p>(a) increase (b) decrease (c) not change</p>	a



3	<p>If the bias voltage in Figure is decreased, the positive portion of the output voltage will</p>  <p>(a) increase (b) decrease (c) not change</p>	b
4	<p>If the value of R_3 in Figure is decreased, the positive output voltage will</p>  <p>(a) increase (b) decrease (c) not change</p>	b
5	<p>The ideal dc output voltage of a capacitor-input filter is equal to</p> <p>(a) the peak value of the rectified voltage (b) the average value of the rectified voltage (c) the rms value of the rectified voltage</p>	a
6	<p>A 60 V peak full-wave rectified voltage is applied to a capacitor-input filter. If $f = 120$ Hz, $R_L = 10$ k, and $C = 10$ F, the ripple voltage is</p> <p>(a) 0.6 V (b) 6 mV (c) 5.0 V (d) 2.88 V</p>	c



7	Line regulation is determined by (a) load current (b) zener current and load current (c) changes in load resistance and output voltage (d) changes in output voltage and input voltage	d
8	A 10 V peak-to-peak sinusoidal voltage is applied across a silicon diode and series resistor. The maximum voltage across the diode is (a) 9.3 V (b) 5 V (c) 0.7 V (d) 10 V (e) 4.3 V	d
9	In a certain positive clamper circuit, a 120 V rms sine wave is applied to the input. The dc value of the output is (a) 119.3 V (b) 169 V (c) 60 V (d) 75.6 V	b
10	If the input voltage to a voltage tripler has an rms value of 12 V, the dc output voltage is approximately (a) 36 V (b) 50.9 V (c) 33.9 V (d) 32.4 V	b
11	When a silicon diode is open, a DMM will generally indicate (a) 0 V (b) OL (c) approximately 0.7 V (d) approximately 0.3 V	b
12	If one of the diodes in a bridge full-wave rectifier opens, the output is (a) 0 V (b) one-fourth the amplitude of the input voltage (c) a half-wave rectified voltage (d) a 120 Hz voltage	c