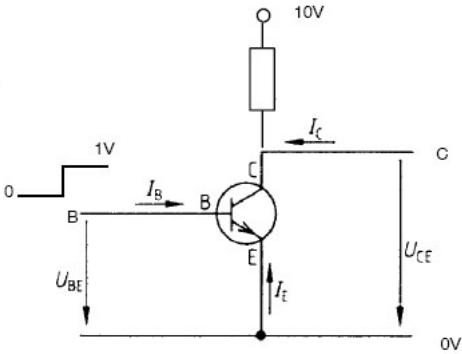
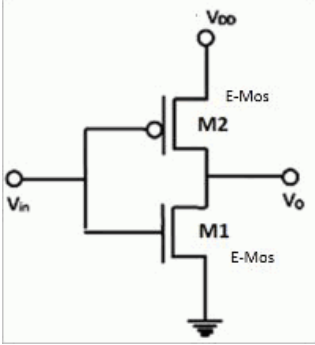
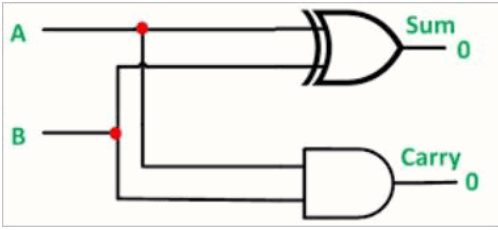
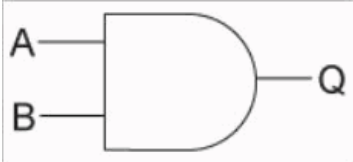


(M04)基礎電子學：

題號	答案	題目
1(0020616)	A	Which of the following statements is correct about the LED? (A)it is used as a general-purpose indicator (B)it is ideal for use as a voltage regulator (C)a reverse-biased is used for normal operation  下列有關於發光二極體之敘述何者正確？(A)可當一般用途之指示燈 (B)它適用在穩壓電路 (C)正常工作於逆向電壓
2(0020542)	B	The region in a P-N junction diode where no free charge carriers exist is known as the: (A)collector (B)depletion region (C)enhancement region  在P-N接面二極體中有一區域沒有自由電荷載子存在，稱作？(A)集極 (B)空乏區 (C)加強區
3(0048003)	A	In a PNP transistor, conventional current will flow when. (A)the emitter is more positive than the base. (B)the base is more positive than the emitter. (C)the collector is more positive than the emitter.  在PNP電晶體內，常見的電流會流通是當：(A)射極電壓大於基極電壓 (B)基極電壓大於射極電壓 (C)集極電壓大於射極電壓
4(0020552)	A	In normal operation of a bipolar junction transistor the: (A)base-emitter junction is forward biased and the collector-base junction is reverse biased (B)base-emitter junction is reverse biased and the collector-base junction is forward biased (C)both junctions are forward biased  在雙極性接面電晶體之一般工作狀態？(A)基射極順向偏壓以及集基極逆向偏壓 (B)基射極逆向偏壓以及集基極順向偏壓 (C)二個接面皆順向偏壓
5(0026860)	A	What kind of components can be integrated in integrated circuits? (A)resistors, capacitors and transistors (B)transistors and coils only (C)relays and switches  什麼樣的組件可以整合集成在積體電路？ (A)電阻，電容和電晶體 (B)只有電晶體和線圈 (C)繼電器和開關
6(0026851)	C	What is the expected voltage change at the output C, when the voltage at the base changes from 0V to 1V? (A) The voltage will change from

		<p>0V to 10V. (B) The voltage will stay at 10V. (C) The voltage will change from 10V to 0V.</p> <p>何者是輸出點C預期的電壓變化？當基極的電壓從0伏特變成1伏特時。(A) 輸出電壓會從0伏特變成10伏特 (B) 輸出電壓一直會保持在10伏特 (C) 輸出電壓會從10伏特變成0伏特</p> 
7(0048292)	A	<p>What special type of diode is capable of both amplification and oscillation? (A) Point contact diodes. (B) Zener diode (C) light-emitting diode</p> <p>哪種特殊類型二極體能具有放大和振盪？(A) 點接觸二極體 (B) 稽納二極體 (C) 發光二極體</p>
8(0048006)	B	<p>The resistance measured using an AVO between the Collector and Emitter of a transistor is. (A) low resistance looking into Collector and high resistance looking into Emitter. (B) high resistance looking both ways. (C) low resistance looking into Emitter and high resistance looking into Collector.</p> <p>使用三用電表測量電晶體的集極和射極之間的電阻，其特性為： (A) 由集極端看進去為低電阻、由射極端看進去為高電阻 (B) 由兩端看進去皆為高電阻 (C) 由射極端看進去為低電阻、由集極端看進去為高電阻</p>
9(0048094)	C	<p>A decoupling capacitor in a PCB is used to (A) minimise transient currents. (B) pass DC only. (C) pass high-frequency noise.</p> <p>在印刷電路板上，去耦合電容是用來：(A) 使瞬態電流最小化 (B) 僅讓DC通過 (C) 讓高頻雜訊通過</p>

10(0048165)	B	<p>Increasing velocity feedback from optimum will give (A) faster performance (B) sluggish performance (C) no change on the output</p> <p>由最佳化設定值增加速度回授將會造成 (A) 更快的性能 (B) 遲鈍的性能 (C) 輸出沒有什麼改變</p>
11(0048010)	B	<p>In a transistor, the arrow always points in the direction of. (A) electron flow. (B) conventional current. (C) emitter.</p> <p>在一個電晶體中，箭頭的方向總是指向 (A) 電子流 (B) 習慣用語的電流 (C) 射極</p>
12(0020771)	A	<p>What are the two stable operating conditions of an SCR? (A) Conducting and nonconducting. (B) Oscillating and quiescent. (C) Forward conducting and reverse conducting.</p> <p>矽控整流器有那兩種穩定狀態？(A) 導通及不導通 (B) 振盪及靜止 (C) 順向導通及逆向導通</p>
13(0048288)	A	<p>Structurally, what are the two main categories of semiconductor diodes? (A) Junction and point contact. (B) Forward and reverse (C) Polar and non-polar</p> <p>在結構上，半導體二極體的兩個主要類別是什麼？(A) 接面及點接觸 (B) 順向及逆向 (C) 極性與非極性</p>
14(0048147)	C	<p>What type of gate is an OR gate with both inverted inputs and inverted outputs? (A) NAND gate (B) NOR gate (C) AND gate</p> <p>當一個OR gate的二個輸入端以及一個輸出端皆接上一個反向器時，相當於以下何種邏輯電路？(A) NAND gate (B) NOR gate (C) AND gate</p>
15(0048171)	B	<p>The circuit in the picture is a(n) ... (A) comparator (B) inverter (C) adder</p> <p>圖中電路是一個... (A) 比較器 (B) 反向器 (C) 加法器</p>

		
16(0048150)	C	<p>The rotor of an autosyn position indicating system is (A) a permanent magnet (B) spring controlled (C) an electromagnet</p> <p>自動同步位置指示器系統的轉子是 (A) 永磁 (B) 彈簧控制 (C) 電磁鐵</p>
17(0026928)	B	<p>The circuit in the picture is a(n)... (A) inverter (B) adder (C) integrator</p> <p>圖中電路是一個... (A) 反向器 (B) 加法器 (C) 積分器</p> 
18(0026923)	B	<p>In general, when operating frequency gets higher, the gain of an OP-amplifier will be .... (A) higher. (B) lower. (C) sometimes higher and sometimes lower.</p> <p>一般而言，當工作頻率愈高時，運算放大器的放大倍率愈 .... (A) 高。 (B) 低。 (C) 不一定。</p>
19(0048064)	C	<p>What is the gate in the picture? (A) NAND gate. (B) NOR gate. (C) AND gate.</p> <p>下圖是什麼類型的邏輯閘？反及閘 (B) 反或閘 (C) 及閘</p> 
20(0026918)	A	<p>How is the conduction of a bipolar transistor established? (A) By minority carriers injected into the base region. (B) By majority carriers injected into the base region. (C) By minority carriers injected into the collector region.</p>

		<p>雙極電晶體的傳導是如何建立的？ (A) 靠少數載子注入基極區域 (B) 靠多數載子注入基極區域 (C) 靠少數載子注入集極區域</p>
21(0047927)	A	<p>The electrodes of an SCR are (A) gate, cathode, anode (B) source, drain, gate (C) anode, cathode, source.</p> <p>一個矽控整流二極體的電極是： (A) 柵極，陰極，陽極 (B) 源極，漏極，柵極 (C) 陽極，陰極,源極</p>