

2014 Science Assessment Test Sample Questions





SECTION A

This section consists of 24 multiple-choice questions. Choose the best answer for each question.

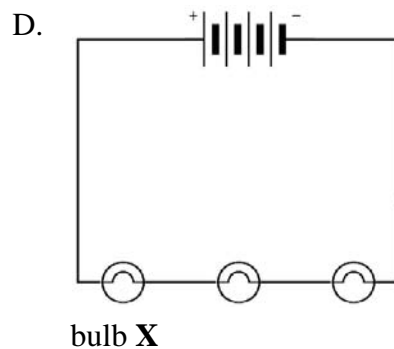
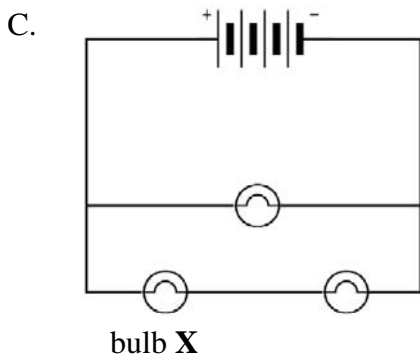
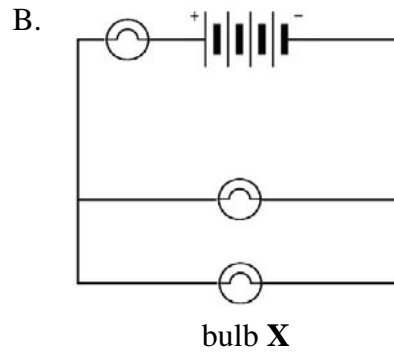
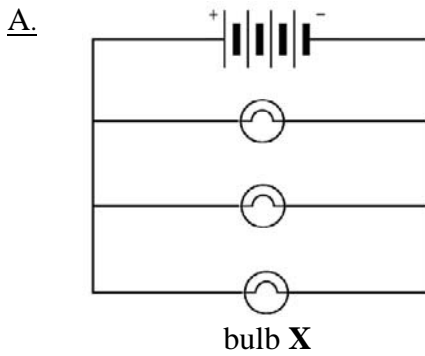
3. Stephen looks at the object shown below:



Which of the following correctly represents the image formed on his retina?

- A.  B. 
- C.  D. 

13. Three light bulbs with the same resistance are connected to a 6V battery in different ways as shown below. In which of the following connections will bulb X be the brightest?



14. A key for four classes of animals **P**, **Q**, **R** and **S** is shown below:

1	a	With wings .....	Go to 2
	b	Without wings .....	<b>P</b>
2	a	With antennae .....	<b>Q</b>
	b	Without antennae .....	Go to 3
3	a	With feathers .....	<b>R</b>
	b	Without feathers .....	<b>S</b>

To which of the above classes does the animal shown in the photograph below belong?



- A. **P**
- B. **Q**
- C. **R**
- D. **S**

## SECTION B

Answer ALL questions. Write your answers in the spaces provided.

1. Thomas fixed a syringe on a bench as shown in Figure 1(a). He put five pieces of wood of equal weight one by one onto the set-up, and recorded the volume of air in the syringe. Figure 1(b) is his notes.

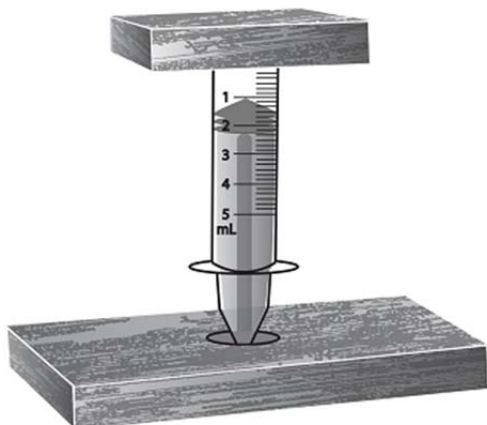


Figure 1(a)

Notes

1 piece	→	3 ml
2 pieces	→	2 ml
3 pieces	→	1.5 ml
4 pieces	→	1.2 ml
5 pieces	→	1 ml

Figure 1(b)

- (a) State the purpose of the experiment conducted by Thomas.

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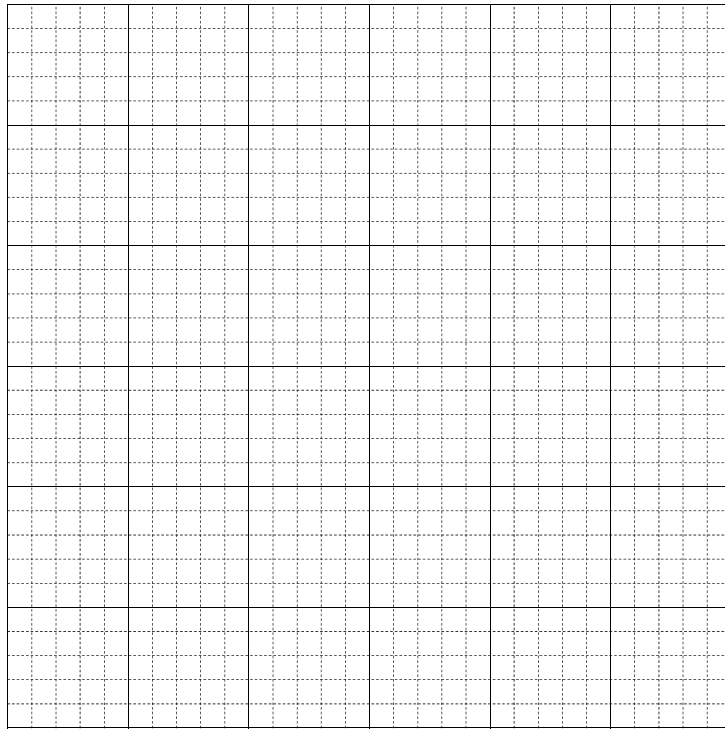
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(2 marks)

- (b) (i) Present the experimental data in the form of a table.

(2 marks)

- (b) (ii) Draw a graph to show the relationship in (i).



(2 marks)

- (iii) What conclusion can you draw from the graph in (ii)?

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(2 marks)

- (c) Estimate the volume of air in the syringe if 6 pieces of wood are put onto the set-up. (Show your working on the graph.)

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(2 marks)





甲部

本部設 24 題多項選擇題。選出每題最佳的答案。

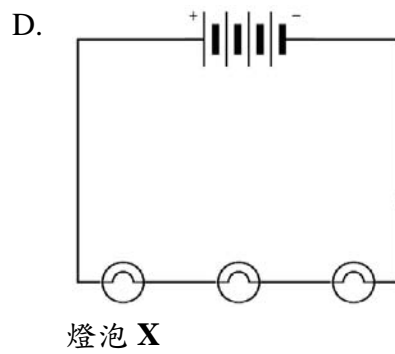
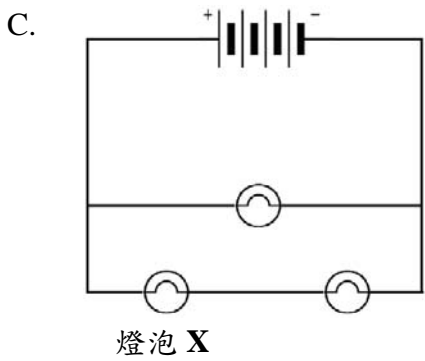
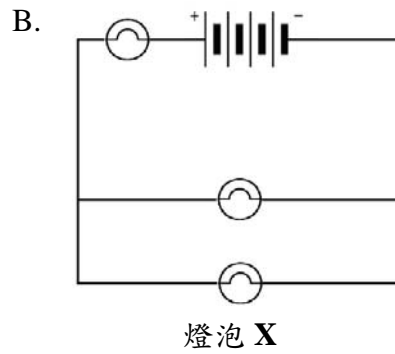
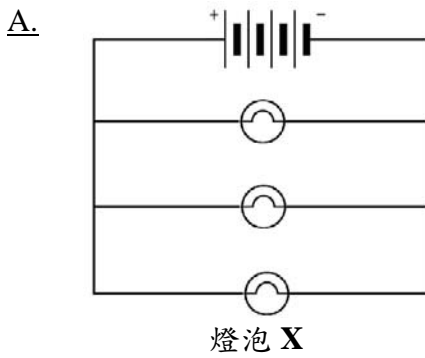
3. 志堅看著下面的物體：



下列何者正確代表在他的視網膜上所形成的影像？

- A.  B. 
- C.  D. 

13. 如以下各圖所示，用不同方法把三個電阻相同的燈泡連接至一個 6 V 電池組。下列所示各連接方法中的燈泡 X，何者最亮？



14. 下面顯示四類動物 **P**、**Q**、**R** 和 **S** 的檢索表：

1	a	有翼膀.....	跳至 2
	b	沒有翼膀.....	<b>P</b>
2	a	有觸角.....	<b>Q</b>
	b	沒有觸角.....	跳至 3
3	a	有羽毛.....	<b>R</b>
	b	沒有羽毛.....	<b>S</b>

以下照片所示的動物屬於哪一類？



- A. **P**
- B. **Q**
- C. **R**
- D. **S**

乙部

全部問題均須作答。把答案寫在所預留的空位上。

1. 如圖 1(a) 所示，建安把一支針筒固定在一實驗桌上。他把五片重量相同的木塊逐一放在裝置上，並量度針筒內空氣的相應體積。圖 1(b) 是他寫下的筆記。

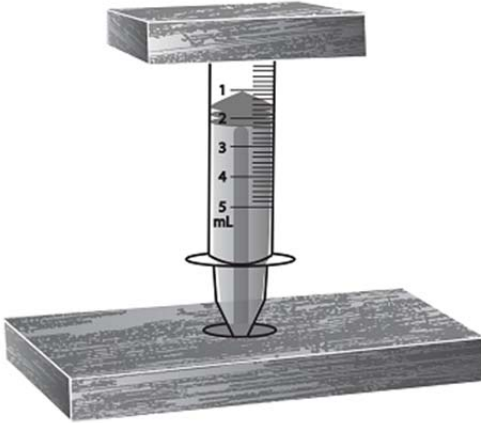


圖 1(a)

筆記

1 片 -----> 3 ml  
2 片 -----> 2 ml  
3 片 -----> 1.5 ml  
4 片 -----> 1.2 ml  
5 片 -----> 1 ml

圖 1(b)

- (a) 寫出建安所做的實驗有何目的。

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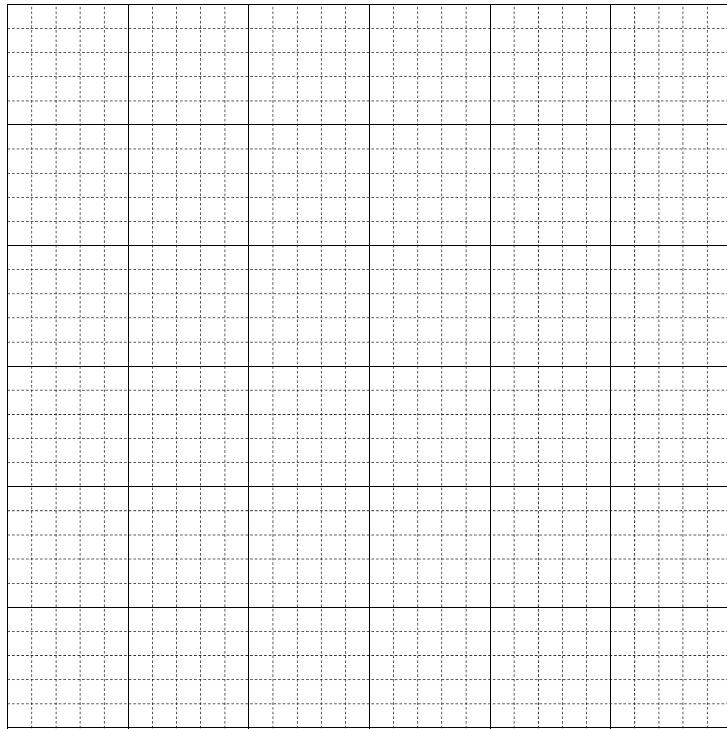
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(2 分)

- (b) (i) 用一表格來表達在這實驗得到的數據。

(2 分)

(b) (ii) 繪一坐標圖來顯示在 (i) 的關係。



(2 分)

(iii) 你可從 (ii) 中繪畫的坐標圖得出什麼結論？

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(2 分)

(c) 如果把 6 片木塊放在該裝置上，估算在針筒內空氣的體積。(須在坐標圖上顯示你的方法。)

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(2 分)