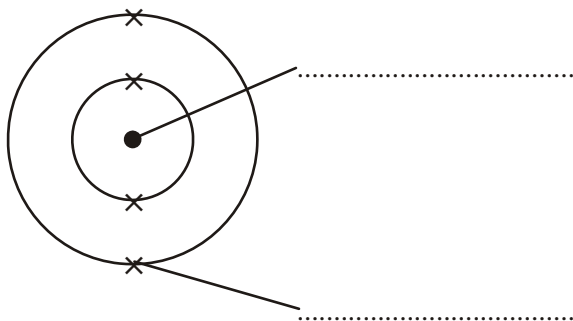


Atoms and the periodic table

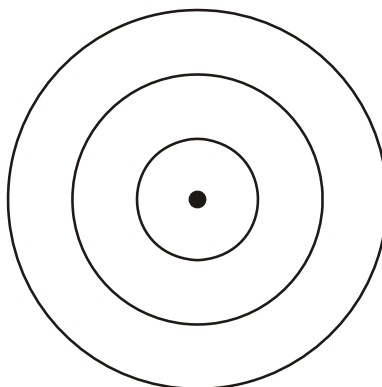
1. (a) The diagram represents an atom of beryllium. Use words from the box to label the diagram.

- | |
|----------|
| electron |
| ion |
| isotope |
| molecule |
| nucleus |



(2)

(b) Use crosses (x) to complete the diagram to show the electronic structure of a magnesium atom. The atomic (proton) number of magnesium is 12.



(2)
(Total 4 marks)

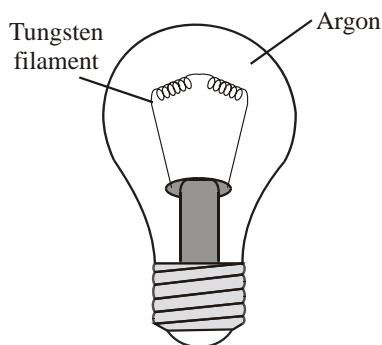
2. The diagram shows part of the periodic table. ###

Group 1		Group 2		Group 3		Group 4	Group 5	Group 6	Group 7	Group 0
23	24			27	28	31	32	35	40	
sodium	magnesium			aluminium	silicon	phosphorous	sulphur	chlorine	argon	
11	12			13	14	15	16	17	18	

Choose from the elements shown in the table:

- (a) one metal (1)
 - (b) a noble gas (1)
 - (c) a coloured gas (1)
- (Total 3 marks)**

3. The diagram shows an electric light bulb.###



When electricity is passed through the tungsten filament it gets very hot and gives out light.

- (a) What reaction would take place if the hot tungsten was surrounded by air?

 (1)

Unit C1, C1.1.1 and C1.1.2

- (b) State why argon is used in the light bulb. Explain your answer in terms of the electronic structure of an argon atom.

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(3)
(Total 4 marks)