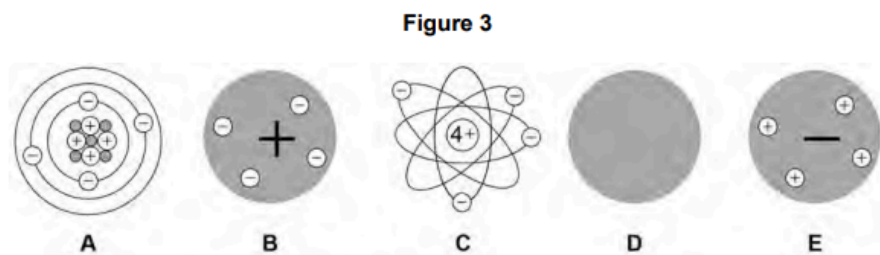


(The nuclear model and the development of the atom)

Q1. a) (2018)

Figure 3 represents different models of the atom.



Which diagram shows the plum pudding model of the atom?

[1 mark]

Tick **one** box.

A	
----------	--

B	
----------	--

C	
----------	--

D	
----------	--

E	
----------	--

Q1.b) (2018)

Which diagram shows the model of the atom developed from the alpha particle scattering experiment?

[1 mark]

Tick **one** box.

A	
----------	--

B	
----------	--

C	
----------	--

D	
----------	--

E	
----------	--

Q1.c) (2018)

Which diagram shows the model of the atom resulting from Bohr's work?

[1 mark]

Tick **one** box.

A	
----------	--

B	
----------	--

C	
----------	--

D	
----------	--

E	
----------	--

Q2. (2018)

Chadwick's experimental work on the atom led to a better understanding of isotopes.

Explain how his work led to this understanding.

[3 marks]

Q3. (2019)

The model of the atom changed as new evidence was discovered.

The plum pudding model suggested that the atom was a ball of positive charge with electrons embedded in it.

Evidence from the alpha particle scattering experiment led to a change in the model of the atom from the plum pudding model.

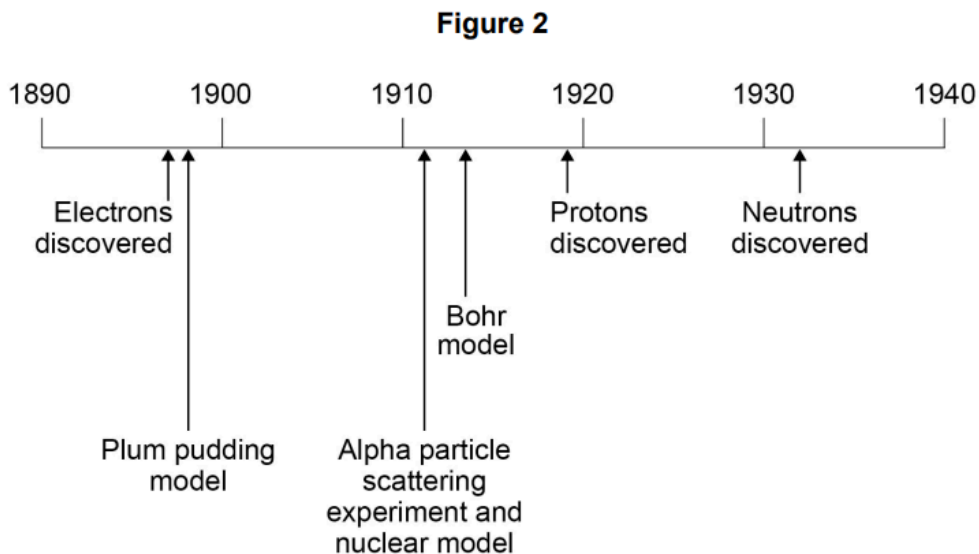
Explain how.

[4 marks]

Q4. a). (2020)

This question is about the development of scientific theories.

Figure 2 shows a timeline of some important steps in the development of the model of the atom.



The plum pudding model did not have a nucleus.

Describe **three** other differences between the nuclear model of the atom and the plum pudding model.

[3 marks]

1 _____

2 _____

3 _____

Q4. b). (2020)

Mendeleev published his periodic table in 1869.

Mendeleev arranged the elements in order of atomic weight.

Mendeleev then reversed the order of some pairs of elements.

A student suggested Mendeleev's reason for reversing the order was to arrange the elements in order of atomic number.

Explain why the student's suggestion **cannot** be correct.

Use **Figure 2**.

[2 marks]

Q4. c). (2020)

Give the correct reason why Mendeleev reversed the order of some pairs of elements.
[1 mark]

Q5. (2020)

Niels Bohr adapted the nuclear model.

Describe the change that Bohr made to the nuclear model.

[2 marks]

Q6. (2023)

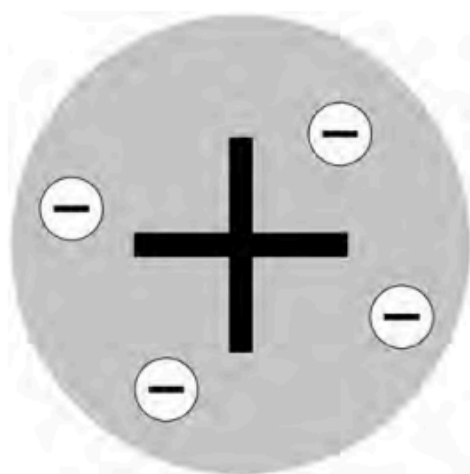
Discoveries in chemistry led to a better understanding of atomic structure.

Atoms were originally thought to be tiny spheres that could not be divided.

The plum pudding model of the atom was then developed.

Figure 1 represents the plum pudding model of the atom.

Figure 1



Describe the plum pudding model of the atom.

[2 marks]

Atoms contain electrons, neutrons and protons.

Write these three particles in order of their discovery.

[1 mark]

Earliest _____

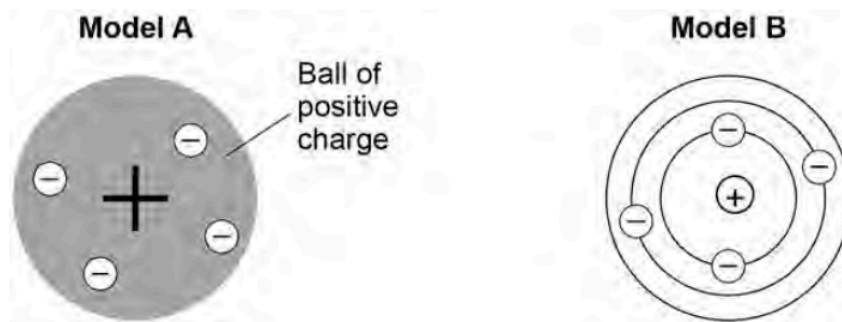
Latest _____

Q8. a). (2024)

This question is about models of the atom.

Figure 2 shows two early models of the atom.

Figure 2



Name the models of the atom shown in **Figure 2**.

[2 marks]

Model **A** _____

Model **B** _____

Q8. b). (2024)

Compare model **A** with the model of the atom used today.

Use **Figure 2**.

[4 marks]
