

Name of the Student: _____

Max. Marks : 11 Marks

Time : 11 Minutes

Q1.

In some areas of the U.K. people are worried because their houses are built on rocks that release radon.

Read the information about radon.

- It is a gas.
- It is formed by the breakdown of radium.
- It emits alpha radiation.
- Each radon atom has 86 protons.
- Each radon atom has 136 neutrons.

Explain why it may be dangerous to live near rocks that release radon.

To gain full marks in this question you should write your ideas in good English. Put them into a sensible order and use the correct scientific words.

(Total 3 marks)

Q2.

In some areas of the U.K. people are worried because their houses are built on rocks that release radon.

Read the information about radon.

- It is a gas.
- It is formed by the breakdown of radium.
- It emits alpha radiation.
- Each radon atom has 86 protons.
- Each radon atom has 136 neutrons.

(i) How many electrons has each atom of radon? _____

(ii) What is the mass (nucleon) number of radon? _____

(Total 2 marks)

Q3.

The picture shows a man at work in a factory that uses radioactive materials.



The radioactive material is kept behind glass shields. The man wears gloves so that he cannot touch the radioactive material directly.

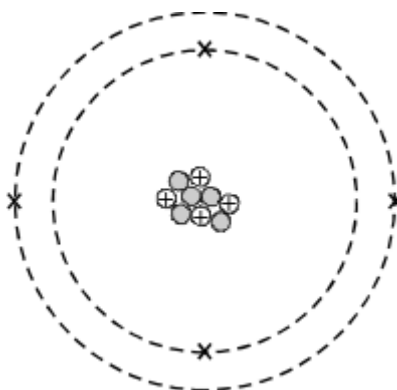
Explain, as fully as you can, why these precautions are taken.

To gain full marks in this question you should write your ideas in good English. Put them into a sensible order and use the correct scientific words.

(Total 4 marks)

Q4.

The diagram shows an atom.



How many protons are there in the nucleus of the atom? _____

What is the mass number of the atom? _____

(Total 2 marks)