Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 6_ Radioactivity

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Name of the Student:_____
Max. Marks : 12 Marks **Time : 12 Minutes**

Q1.

(i) Use words from the box to complete the sentences below about ions.

absorbing	gaining	inner	losing	outer

(2)

Atoms may form positive ions by ..... electrons.
The electrons involved in forming positive ions are the ..... electrons.

(ii) Which of these radiations is both electromagnetic and ionising?

(1)

- ☒ **A** alpha
- ☒ **B** beta minus
- ☒ **C** gamma
- ☒ **D** neutron

(iii) Which type of radiation will travel the shortest distance in air?

(1)

- ☒ **A** alpha
- ☒ **B** beta minus
- ☒ **C** beta plus
- ☒ **D** gamma

(Total for question = 4 marks)

Q2.

Ionising radiations are emitted by unstable nuclei.
Some unstable nuclei decay by emitting β^- radiation.

(i) Describe the process of β^- emission.

(3)

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(ii) Explain what happens to the mass number and the atomic number of a nucleus when β^- emission occurs.

(3)

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Q3.

The fuel in a nuclear power station is an isotope of uranium.

The symbol for a nucleus of this uranium isotope is $^{235}_{92}U$.

(i) How many protons are there in a nucleus of this isotope?

Put a cross (☒) in the box next to your answer.

(1)

- ☒ **A** 92
- ☒ **B** 143
- ☒ **C** 235
- ☒ **D** 327

(ii) Name another particle in a nucleus of this isotope.

(1)

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