GET BETTER AT PHYSICS · MARK SCHEME

Nuclear Notation & Isotopes: tiered multiple choice

Edexcel IAL Physics · Unit 4 (WPH14) · Specification points 111 · 5 questions · 5 marks

1 mark per correct letter

Worked reasoning for every question

How students did = from Pearson examiner reports, where available

Answer key

Q1	Q2	Q3	Q4	Q5
B	A	D	B	A

Easy

Questions 1–5

1 **B**

Number of neutrons from nuclear notation · Edexcel IAL January 2024 · Unit 4 · Q1

The top number (121) is the nucleon number and the bottom number (51) is the proton number. Neutrons = 121 − 51 = 70.

How students did: 96% of students got this right in January 2024.

2 **A**

Writing an isotope in nuclear notation · Edexcel IAL October 2023 · Unit 4 · Q1

Nucleon number = protons + neutrons = 76 + 190 = 266, written at the top; proton number 76 at the bottom: $^{266}_{76}\text{Os}$.

How students did: 89% of students got this right in October 2023.

3 **D**

Nucleons and neutrons in oxygen-17 · Edexcel IAL January 2022 · Unit 4 · Q1

The nucleon number is 17 (the top number). Oxygen has 8 protons, so it has 17 − 8 = 9 neutrons.

How students did: 85% of students got this right in January 2022.

4 **B**

Protons and neutrons from nuclear notation · Edexcel IAL June 2025 · Unit 4 · Q1

For $^{213}_{85}\text{At}$, the proton number is 85 and the nucleon number is 213. Neutrons = 213 − 85 = 128.

5 **A**

Protons and neutrons in oganesson-294 · Edexcel IAL January 2021 · Unit 4 · Q3

The proton number (bottom) is 118. Neutrons = nucleon number − proton number = 294 − 118 = 176.

End of mark scheme. Answers from Pearson's published mark schemes; explanations written for this pack. Pearson Edexcel material is © Pearson Education Ltd. More free packs and 1-to-1 tuition: **www.getbetteratphysics.co.uk**

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