NUNAVUT PHYSICS 30 · UNIT D · 5 QUESTIONS

Atomic Physics — Practice Test

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1 **Five different dog breeds sit in a row. Two nuclei have the same atomic number but different mass numbers. The two nuclei are**



A isobars

B isotopes

C isomers

D ions

Understand It with Pulse

Flag a mistake

2 **When a nucleus emits a gamma ray, the change to the nucleus is**

- **A** neither its mass number nor its atomic number changes
- **B** its mass number decreases by 4 and its atomic number decreases by 2
- **C** its atomic number increases by 1 and its mass number is unchanged
- **D** its mass number decreases by 1 and its atomic number is unchanged

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3 **The number of neutrons in a nucleus of $^{235}_{92}U$ is**

ANSWER _____

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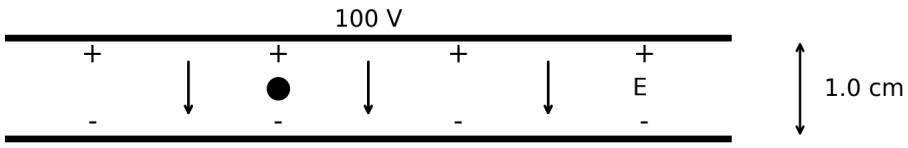
4 **The diagram shows the plates of a Millikan apparatus. A charged oil drop with a mass of 1.63×10^{-15} kg is suspended motionless between the plates. The number of excess electrons on the drop, to the nearest whole number, is ____. (Use $e = 1.60 \times 10^{-19}$ C and $g = 9.8$ m/s².)**



ANSWER

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5 **When a nucleus undergoes beta positive (positron) decay, the change to the nucleus is**

A the atomic number increases by 1 and the mass number is unchanged

B the atomic number decreases by 2 and the mass number decreases by 4

C the mass number decreases by 1 and the atomic number is unchanged

D the atomic number decreases by 1 and the mass number is unchanged

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ANSWER KEY

1. B
2. A
3. 143
4. 10
5. D

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