

Worksheet: Atomic Structure



Q1: When an electron in an atom moves from a higher energy level to a lower energy level, it ___ electromagnetic radiation.

A releases

B absorbs



Question Video

Q2: If an atom has 4 protons, 3 neutrons, and 4 electrons, what is the relative charge of the atom?

A 4

B 8

C 11

D 3

E 0



Question Video

Q3: If an atom has 9 protons and 7 electrons, what is the relative charge of the atom?

A +16

B -2

C +2

D -16

Q4: What is the relative charge of a proton?

A 0

B -1

C +1

Q5: Are neutrons positively charged, negatively charged, or neutral?

A Negatively charged

B Positively charged

C Neutral

Q6: If an ion has 14 electrons but a relative charge of +2, how many protons are in the nucleus of the ion?

A 7

B 14

C 28

D 16

E 2



Question Video

Q7: What are the 2 types of particles that make up the nucleus of an atom?

A Neutrons and electrons

B Protons and electrons

C Protons and neutrons

Q8: What is the relative charge of an electron?

A -1

B 0

C +1

Q9: In the nuclear model of the atom, does the nucleus have a positive charge, a negative charge, or no charge?

A Positive charge

B No charge

C Negative charge

Q10: What is the relative charge of a neutron?

A 0

B +1

C -1

Q11: When an electron — electromagnetic radiation, it moves to a higher energy level in the atom.

A releases

B absorbs

Q12: Are electrons positively charged, negatively charged, or neutral?

A Positively charged

B Negatively charged

C Neutral

Q13: If an atom has 7 protons and 7 electrons, what is the relative charge of the atom?

A 7

B 0

C -1

D 1

E 14

Q14: If a charged atom has 8 protons in its nucleus but a relative charge of -2 , how many electrons does it have?

- A 6
- B 2
- C 10
- D 16
- E 12

Q15: If a neutral atom has 12 protons in its nucleus, how many electrons does it have?

- A 24
- B 0
- C 12
- D 6
- E 1

Q16: What part of an atom contains most of its mass?

- A The electron cloud
- B The nucleus
- C The neutrons only
- D The protons only

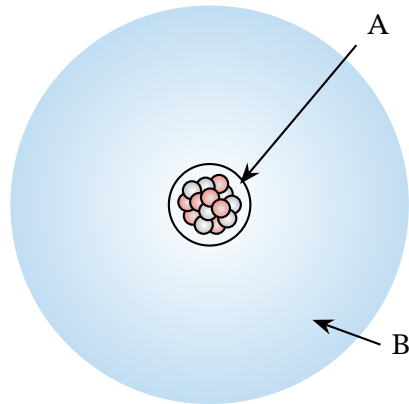
Q17: Which of the following statements about the structure of an atom is correct?

- A An atom consists of a positively charged nucleus, which contains protons and electrons, and a negatively charged neutron cloud surrounding the nucleus.
- B An atom consists of a sphere of positive charge with electrons bound to its surface.
- C An atom consists of a negatively charged nucleus, which contains neutrons, and a positively charged proton cloud surrounding the nucleus.
- D An atom consists of a positively charged nucleus, which contains protons and neutrons, and a negatively charged electron cloud surrounding the nucleus.
- E An atom consists of an electrically neutral nucleus containing protons and electrons.

Q18: If a charged atom has 6 protons in its nucleus but a relative charge of +1 overall, how many electrons does the atom have?

- A 5
- B 7
- C 12
- D 0
- E 1

Q19: The image shows a diagram of an atom, which is not to scale.



► What is the name given to the region marked A?

- A The neutrons
- B The protons
- C The nucleus
- D The electron cloud

► What is the name given to the region marked B?

- A The neutrons
- B The protons
- C The electron cloud
- D The nucleus

Q20: Most of the space in an atom is taken up by ___.

A the electrons

B the nucleus

C empty space