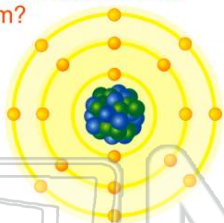




Name _____ Class _____ Date _____

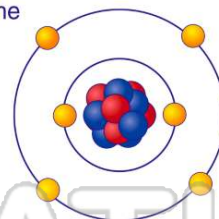
- 1 An atom contains **22 neutrons** and **40 nucleons**. What is the total number of **protons** in the atom?

A 18
B 22
C 40
D 62



- 2 Which **principal quantum number** is assigned to the valence electrons of a **carbon atom** in the ground state?

A 1
B 2
C 3
D 4



- 3 Compared to the maximum number of electrons that can occupy the d sublevel, the **maximum number of electrons** that can occupy the **p sublevel** is

A smaller by two electrons
B smaller by four electrons

- 4 What was the **original mass** of a radioactive sample that decayed to **25 grams** in **four half-life periods**?

A 50 g
B 100 g
C 200 g



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- 7



49 neutrons

C 36 electrons, 36 protons, and 85 neutrons

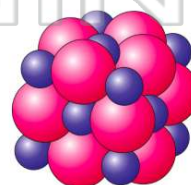
D 36 electrons, 36 protons, and 49 neutrons

- 9 An **electron** will emit energy in **quanta** when its energy state changes from **4p** to

A 5s
B 5p
C 3s
D 6p

- 10 If the **electronegativity difference** between the elements in compound **NaX** is **2.0**, what is element **X**?

A bromine
B chlorine
C fluorine
D oxygen

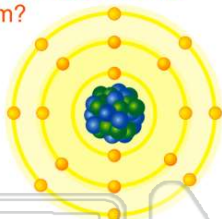




ANSWER KEY

An atom contains **22 neutrons** and **40 nucleons**. What is the total number of **protons** in the atom?

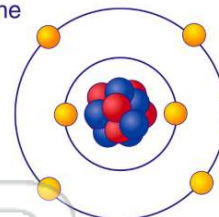
- A 18
- B 22
- C 40
- D 62



(a)

Which **principal quantum number** is assigned to the valence electrons of a **carbon atom** in the ground state?

- A 1
- B 2
- C 3
- D 4



(b)

Compared to the maximum number of electrons that can occupy the d sublevel, the **maximum number of electrons** that can occupy the **p sublevel** is

- A smaller by two electrons
- B smaller by four electrons
- C greater by two electrons

(b)

What was the **original mass** of a radioactive sample that decayed to **25 grams** in **four half-life periods**?

- A 50 g
- B 100 g
- C 200 g
- D 400 g



(d)



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- C 36 electrons, 36 protons, and 85 neutrons
- D 36 electrons, 36 protons, and 49 neutrons

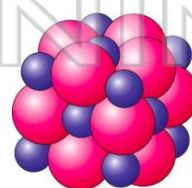
An **electron** will emit energy in **quanta** when its energy state changes from **4p** to

- A 5s
- B 5p
- C 3s
- D 6p

(c)

If the **electronegativity difference** between the elements in compound **NaX** is **2.0**, what is element **X**?

- A bromine
- B chlorine
- C fluorine
- D oxygen



(a)