

Periodic Table Test 2

Chemistry

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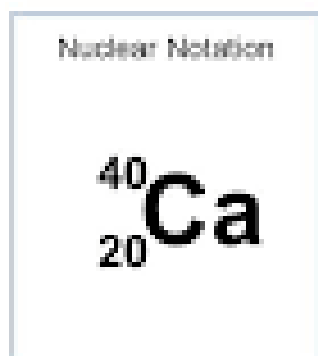
VIOLATIONS: Use of any unapproved electronic devices, conversations during the test, disruptions or any form of non-compliance.

Mark the letter corresponding to the correct answer on the answer sheet.

- Which subatomic particles exist in the **nucleus** of an atom?
a. protons only
b. protons and neutrons only
c. protons and electrons only
d. protons, neutrons and electrons
- What are the subatomic particles in an atom?
a. Protons only
b. Protons and neutrons only
c. Protons, neutrons and electrons
d. none of the above
- An electron that is found in the outermost shell of an atom and determines the atom's chemical properties is called a(n)
a. valence electron.
b. paired electron.
c. p electron.
d. octave electron.
- How many valence electrons do the elements in main group 8A have?
a. 1
b. 2
c. 7
d. 8
- How many valence electrons do the elements in main group 7A have?
a. 1
b. 2
c. 7
d. 8
- How many valence electrons do the elements in alkaline earth metal group have?
a. 1
b. 2
c. 7
d. 8
- How many valence electrons do the elements in alkali metal group have?
a. 1
b. 2
c. 7
d. 8
- Refer to a periodic table. In which period is calcium?
a. Period 2
b. Period 3
c. Period 4
d. Period 8
- Refer to a periodic table. In which group is calcium?
a. Group 1
b. Group 2
c. Group 3
d. Group 4
- Refer to a periodic table. In which period is potassium?
a. Period 2
b. Period 3
c. Period 4
d. Period 8
- Refer to a periodic table. In which group is potassium?
a. Group 1
b. Group 2
c. Group 3
d. Group 4
- The periodic law states that the physical and chemical properties of elements are periodic functions of their atomic
a. masses.
b. numbers.
c. radii.
d. structures.

13. Elements in the s- or p-blocks of the periodic table are called
a. alloys. b. main-group elements. c. metals. d. transition metals.
14. An element that has 5 valence electrons is in which main group?
a. Main Group 2A b. Main Group 5A c. Main Group 7A d. Main Group 8A
15. How many valence electrons are there in the elements of main group 4.
a. 2 b. 3 c. 4 d. 8
16. Elements in Group 18 have
a. very low reactivity. b. good conductivity.
c. very high reactivity. d. metallic character.
17. Elements in Group 17 are
a. non-metals with very low reactivity. b. metals with very low reactivity.
c. non-metals with very high reactivity. d. metals with very high reactivity.
18. Elements in Group 1 are
a. non-metals with very low reactivity. b. metals with very low reactivity
c. non-metals with very high reactivity. d. metals with very high reactivity
19. An element found in Groups 3–12 of the periodic table is classified as a(n)
a. alkali metal. b. alloy. c. transition metal. d. actinide.
20. Ionization energy is the energy required to remove ___ from an atom of an element.
a. the electron cloud b. all electrons c. one electron d. an ion
21. Across a period in the periodic table, atomic radii change is generally
a. decreases. b. unpredictable.
c. increase. d. no change.
22. Down a group in the periodic table, atomic radii generally
a. decrease. b. remains constant. c. increase. d. vary unpredictably.
23. An octet is equal to
a. 2. b. 4. c. 5. d. 8.
24. What is the common name for the elements of main group 1?
a. Alkali metals b. Alkaline Earth metals
c. Halogens d. Noble gases

25-29. Refer to the following nuclear symbol and answer the questions below.



25. Atomic number of calcium is:

- a. 12 b. 20 c. 40 d. 60

26. Mass number of calcium is:

- a. 12 b. 20 c. 40 d. 60

27. How many protons are there in a calcium atom?

- a. 12 b. 20 c. 40 d. 60

28. How many electrons are there in a calcium atom?

- a. 12 b. 20 c. 40 d. 60

29. How many neutrons are there in a calcium atom?

- a. 12 b. 20 c. 40 d. 60

30. Calcium belong in which group of the periodic table

- a. group 1. b. group 2. c. group 3. d. group 4,

31. Which of the following is the most reactive halogen?

- a. Oxygen b. Fluorine c. Chlorine d. Bromine

32. Which of the following reactions can occur?

- a. $2\text{KI} + \text{Cl}_2 \rightarrow 2\text{KCl} + \text{I}_2$
b. $2\text{KCl} + \text{I}_2 \rightarrow 2\text{KI} + \text{Cl}_2$
c. $2\text{KBr} + \text{I}_2 \rightarrow 2\text{KI} + \text{Br}_2$
d. $2\text{KCl} + \text{Br}_2 \rightarrow 2\text{KBr} + \text{Cl}_2$

33. What is meant by "OCTET RULE"

- a) All the elements will have 8 electrons in energy levels.
b) Atoms prefer gain or lose electrons to achieve 8 electrons in any given energy level.
c) Atoms prefer gain or lose electrons to achieve 8 electrons in the outermost energy level.

d) None of the above.

34. What is "NOT TRUE" about a sodium?

- a) sodium loses an electron to satisfy octet rule.
- b) sodium gain an electron to satisfy octet rule.
- c) sodium makes ions with positive charges.
- d) sodium has one valence electron.

35. What is "NOT TRUE" about chlorine?

- a. chlorine is a non-metal
- b. chlorine is a member element of a halogen group
- c. chlorine loses one electron to satisfy octet rule.
- d. chlorine gains and make 8 electrons in the outermost electron shell.

36. Which one of the following elements contains one valence electrons in the outermost shell.

- a. Potassium b. Calcium c. Carbon d. Oxygen

37. Which one of the following elements contains six valence electrons in the outermost shell.

- a. Potassium b. Calcium c. Carbon d. Oxygen

38. Where do you find s-block elements in the periodic table?

- a. Groups 1 and 2 b. Groups 1-8 c. Groups 03-12 d. Groups 13-18

39. Where do you find p-block elements in the periodic table?

- a. Groups 1 and 2 b. Groups 1-8 c. Groups 03-12 d. Groups 13-18

40. Where do you find d-block elements in the periodic table?

- a. Groups 1 and 2 b. Groups 1-8 c. Groups 03-12 d. Groups 13-18

41. Which of the following atoms contains the most neutrons?

- a. $^{43}_{20}\text{Ca}$ b. $^{45}_{21}\text{Sc}$ c. $^{49}_{22}\text{Ti}$ d. $^{50}_{24}\text{Cr}$

42. Which of the following descriptions is not a characteristic of the nucleus of an atom?

- a. positively charged
- b. contains uncharged particles
- c. accounts for most of the atom's volume
- d. accounts for most of the atom's mass