

Name : ----- Date : -----

Electron Configuration Worksheet

1. Which atom in the ground state has only three electrons in the 3p sublevel?

- a. Phosphorous b. Argon c. Potassium d. Aluminum

Ans.

2. What is the total number of occupied principal energy levels in a neutral atom of neon in the ground state?

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

Ans.

3. Which sublevel configuration correctly represents a completely filled third principal energy level?

- a. $3s^2 3p^6 3d^8$ b. $3s^2 3p^6 3d^{10}$ c. $3s^2 3p^2 3d^8$ d. $3s^2 3p^6 3d^5$

Ans.

4. Which atom in the ground state consists of a partially filled 3p orbital?

- a. Argon b. Potassium c. Calcium d. Aluminum

Ans.

5. In the ground state, the atoms of elements in Period 2 all have the same number of

- a. Protons b. 1s electrons c. Neutrons d. Oxidation states

Ans.

6. What is the electron configuration for a neutral atom in the ground state?

- a. $1s^2 2s^2 3s^1$ b. $1s^2 2s^2 2p^6 3p^1$ c. $1s^2 2s^2 2p^6 3s^1$ d. $1s^2 2s^2 2p^4 3s^1$

Ans.

7. Which represents the electron configuration of an isotope of oxygen in the ground state?

- a. $1s^2 2s^2 2p^1$ b. $1s^2 2s^2 2p^2$ c. $1s^2 2s^2 2p^3$ d. $1s^2 2s^2 2p^4$

Ans.

8. The total number of sublevels in the fourth principal energy level of an atom is

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

Ans.

9. What is a possible electron configuration for argon in the excited state?

- a. $1s^2 2s^2 2p^7 3s^2 3p^5$ b. $1s^2 2s^3 2p^5 3s^2 3p^6$ c. $1s^2 2s^2 2p^6 3s^2 3p^5 4s^1$ d. $1s^2 2s^2 2p^6 3s^2 3p^5 4s^1$

Ans.

10. A maximum of 6 electrons can occupy

- a. an s orbital b. a p orbital c. a d orbital d. a f orbital

Ans.

Electron Configuration Worksheet

Answers

1. Which atom in the ground state has only three electrons in the 3p sublevel?

- a. Phosphorous b. Argon c. Potassium d. Aluminum

Ans. **a**

2. What is the total number of occupied principal energy levels in a neutral atom of neon in the ground state?

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

Ans. **b**

3. Which sublevel configuration correctly represents a completely filled third principal energy level?

- a. $3s^2 3p^6 3d^8$ b. $3s^2 3p^6 3d^{10}$ c. $3s^2 3p^2 3d^8$ d. $3s^2 3p^6 3d^5$

Ans. **b**

4. Which atom in the ground state consists of a partially filled 3p orbital?

- a. Argon b. Potassium c. Calcium d. Aluminum

Ans. **d**

5. In the ground state, the atoms of elements in Period 2 all have the same number of

- a. Protons b. 1s electrons c. Neutrons d. Oxidation states

Ans. **b**

6. What is the electron configuration for a neutral atom in the ground state?

- a. $1s^2 2s^2 3s^1$ b. $1s^2 2s^2 2p^6 3p^1$ c. $1s^2 2s^2 2p^6 3s^1$ d. $1s^2 2s^2 2p^4 3s^1$

Ans. **c**

7. Which represents the electron configuration of an isotope of oxygen in the ground state?

- a. $1s^2 2s^2 2p^1$ b. $1s^2 2s^2 2p^2$ c. $1s^2 2s^2 2p^3$ d. $1s^2 2s^2 2p^4$

Ans. **d**

8. The total number of sublevels in the fourth principal energy level of an atom is

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

Ans. **d**

9. What is a possible electron configuration for argon in the excited state?

- a. $1s^2 2s^2 2p^7 3s^2 3p^5$ b. $1s^2 2s^3 2p^5 3s^2 3p^6$ c. $1s^2 2s^2 2p^6 3s^2 3p^5 4s^1$ d. $1s^2 2s^2 2p^6 3s^2 3p^5 4s^1$

Ans. **c**

10. A maximum of 6 electrons can occupy

- a. an s orbital b. a p orbital c. a d orbital d. a f orbital

Ans. **b**