

CHEMBUDDY CHAPTER 2

2.2 QUANTUM MECHANICAL MODEL

2.3 ELECTRONIC CONFIGURATION



CHOOSE THE CORRECT ANSWER

NO	QUESTION	ANSWER
1	The electronic configuration for element X with 7 electrons is obtained based on the following principle EXCEPT	<p>A. The Pauli's exclusion principle</p> <p>B. The Aufbau principle</p> <p>C. The Heisenberg's uncertainty principle</p> <p>D. Hund's rule</p>
2	Q is an element with proton number of 21. Write the electronic configuration of Q.	<p>A. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$</p> <p>B. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^1$</p> <p>C. $1s^2 2s^2 2p^6 3s^2 3p^1$</p> <p>D. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^1$</p>
3	Give a set of quantum numbers for the electrons that occupy the fourth shell in Scandium (Sc).	<p>A. $n=3, l=1, m=0, s=+1$</p> <p>B. $n=3, l=1, m=1, s=-\frac{1}{2}$</p> <p>C. $n=4, l=0, m=1, s=+\frac{1}{2}$</p> <p>D. $n=4, l=0, m=0, s=-\frac{1}{2}$</p>
4	The Pauli Exclusion Principle states that:	<p>A. no two electrons in different atoms can have the same set of 4 quantum numbers</p> <p>B. no two electrons can have the same spin, m_s</p> <p>C. no two electrons in the same atom can have the same set of 4 quantum numbers at the same time</p> <p>D. no two electrons in the same atom can occupy the same orbital at the same time</p>
5	Nickel has 28 protons. Give a set of possible quantum number for the electron with the highest energy in Ni^{2+} ion.	<p>A. $n=3, l=2, m=-1, s=-1/2$</p> <p>B. $n=3, l=1, m=-1, s=+1/2$</p> <p>C. $n=4, l=0, m=-1, s=+1/2$</p> <p>D. $n=4, l=0, m=0, s=-1/2$</p>

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6	Ion that have the similar electronic configuration with $_{10}\text{Ne}$ is;	A. O^{2+} C. N^{3-} B. Mg^{2+} D. Cl^-
7	An atom containing eight electrons in 3d orbital are arranged according to (C1&C2)	A. Aufbau principle B. Hund's rule C. Heisenberg's Uncertainty Principle D. De Broglie's Postulates
8	Which of the following electronic configuration represent an element that form ion with a charge of 2-.	A. $1s^2 2s^2 2p^6 3s^2$ B. $1s^2 2s^2 2p^6 3s^2 3p^2$ C. $1s^2 2s^2 2p^6 3s^2 3p^4$ D. $1s^2 2s^2 2p^6 3s^2 3p^5$
9	Choose the most suitable reason of the anomaly in electronic configuration of Chromium with the proton number of 24.	A. Stability of fully filled 3d orbital. B. Stability of half-filled orbital. C. Stability of half-filled 4s orbital. D. Stability of half-filled 3d orbital.
10	Shown below are a set of quantum number of the highest energy electron in P^+ ion. Determine the electronic configuration of P atom. $n=4, l=0, m=0, s=+\frac{1}{2}$	A. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$ B. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$ C. $1s^2 2s^2 2p^6 3s^2 3p^6$ D. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^1$

