

## دليل استرشادي كيمياء انجليزي

1- Elements of the same group, the values of their atomic radii measured by Angstrom as the following

A	B	C	D
1.96	2.27	1.52	2.48

Which of the following is correct?

- a) The element (A) has smaller electronegativity than the element (B)
- b) The element (D) has greater electronegativity than the element (C)
- c) The element (C) has smaller electron affinity than the element (A)
- d) The element (B) has higher ionization energy than the element (D)

2 - Bohr's atomic model is distinguished from Rutherford's model in that the electrons orbit the nucleus in Bohr's model in:

- a) Special orbits.
- b) Definite allowed energy levels.
- c) That they revolve around the nucleus.
- d) That they revolve at very high speed.

3 - If the electrons gains energy equal 10.2 ev it transfer from level k to level L, to transfer the electron from level M to level L

- a) It lose energy equal 1.89 ev
- b) It gain energy equal 1.89 ev
- c) It lose energy equal 10.2 ev
- d) It gain energy equal 10.2 ev

4- If the Second ionization energy and Third ionization energy of an element as shown in the following equations



This element is characterized from the previous elements in its same period by

- a) Non - metal has low ionization energy
- b) Metal has low ionization energy
- c) Non -metal has high ionization energy
- d) Metal has high ionization energy

5- X and Y are two elements are located in the same period

their atomic radii  $X = 0.157 \text{ \AA}$  ,  $Y = 1.04 \text{ \AA}$

When the two elements are combine together .....

- a) X is oxidized while Y is reduced
- b) Both of X and Y are reduced
- c) X is reduced while Y is oxidized
- d) Both of X and Y are oxidized

6 -The modern atomic theory modified the inadequacy in Bohr's atomic model by

- a) The electron has wave property only
- b) The electron is negative material particle only
- c) The electron orbits the nucleus in electron cloud
- d) The electron has a dual nature

7- By using the following table

Atom or ion	Electronic configuration
A <sup>-1</sup>	[ <sub>10</sub> Ne]
B <sup>-2</sup>	[ <sub>10</sub> Ne]
C	[ <sub>18</sub> Ar] 4s <sup>1</sup>
D	[ <sub>10</sub> Ne] 3s <sup>1</sup>

The arrangement of elements according to the electronegativity is

- a)  $A > B > D > C$
- b)  $D < A < C < B$
- c)  $D > C > B > A$
- d)  $A > D > C > B$

8 -Each of hydrogen and helium atoms contain one energy level'''

In the light of the previous statement, which of the following is correct:

- a) They differ in the atomic emission spectrum.
- b) They are equal in number of electrons.
- c) They differ in the principal quantum number.
- d) They are similar in the atomic emission spectrum.

9- By the application of the wave equation on the last electron of sodium atom  $_{11}\text{Na}$

- a) It is possible to determine its position accurately in the level M
- b) It moves nearer and farther from the nucleus in the level M
- c) Its energy is less than the energy of the electrons in the L level
- d) The electron transfers to the level L by losing quantum of energy

10 -To get visible spectrum of the hydrogen atom of electron exited at the third energy level (M) must

- a) The electron lose energy less than energy gain
- b) The electron lose energy more than energy gain
- c) The electron gain a quantum of energy
- d) The electron lose energy same than energy gain

11 -An element X its electron configuration ends by  $3p^1$ , then with respect to the elements that precede it in the period, this element is:

- a) A non-metallic element and its electron affinity is high.
- b) A non-metallic element and its electron affinity is low.
- c) A metallic element and its electron affinity is high.
- d) A metallic element and its electron affinity is low.

12- An element (X) its electronic configuration ends by the following sublevels  $5s^2 4d^{10} 5p^5$

The properties of this element with the respect to the elements before it in its period

- a) Its oxide is basic and its ionization potential is small
- b) Its oxide is amphoteric and its ionization potential is high
- c) Its oxide is acidic and its ionization potential is high
- d) Its oxide is acidic and its ionization potential is small