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

$X^{+} \rightarrow X^{2+} + e^{-}$ $\Delta H = +495$ kj / mol.

$X^{2+} \rightarrow X^{3+} + e^{-}$ $\Delta H = +4560$ kj / mol

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 A0 , Y = 1.04 A0

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) d)Both of X and Y are oxidized

6 -The modern atomic theory modified the inadequecy 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^{-1}	$[_{10}Ne]$
B^{-2}	$[_{10}Ne]$
C	$[_{18}Ar]\ 4s^1$
D	$[_{10}Ne]\ 3s^1$

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 $_{11}Na$

a) It is possible to determine its position accuretly 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 transferes 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