

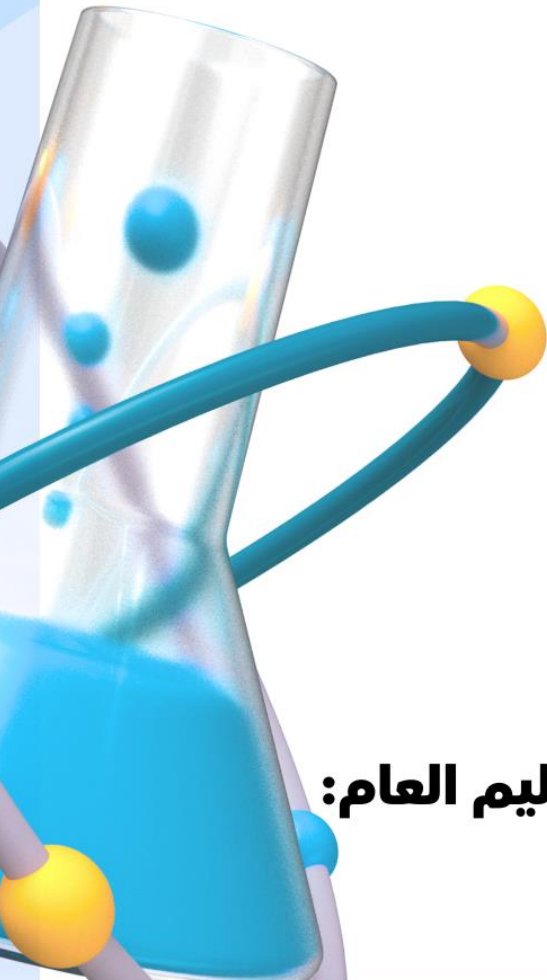
الإدارة المركزية للتعليم العام  
مكتب تنمية مادة العلوم



# CHEMISTRY

2nd secondary  
Second term

## HOME PERFORMANCE



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د. هالة عبدالسلام خفاجي

2026

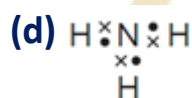
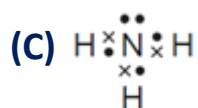
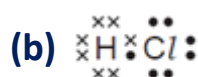
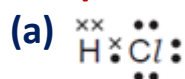
week

2

## Home performance (Week 2)

### Q1/ choose the correct answer:-

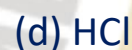
**1-Which electron arrangement for the outer shell electrons in a covalent compound is correct?**



**2- Which of the following molecules has a central atom that does not reach The electronic configuration of a noble gas and is surrounded by the largest number of bond pairs?**



**3- Which of the following choices represents a nonpolar molecule with the largest number of lone pairs?**

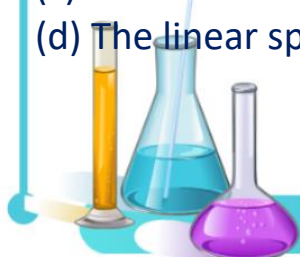


**4-Which of the following statement about a molecule  $\text{NH}_3$ , is correct?**

- (a) Each hydrogen atom donates a pair of electrons to a nitrogen atom
- (b) There are double covalent bonds between the nitrogen atom and the hydrogen Atom
- (c) There are single covalent bonds between its hydrogen atoms
- (d) There are three shared pairs of electrons in the molecule

**5- Which of the following choices explains the polarity of hydrogen chloride molecules?**

- (a) Complete transfer of electrons to the chlorine atom.
- (b) Displacement of the electron cloud toward the more electronegative atom Without complete transfer.
- (c) The difference in electronegativity between hydrogen and chlorine is 0.4.
- (d) The linear spatial shape of the molecule.



**6- Which of the following molecules has the highest solubility in polar solvents such as water?**

- (a)  $\text{CH}_4$
- (b)  $\text{Cl}_2$
- (c)  $\text{CO}_2$
- (d)  $\text{NH}_3$

**7- Which Lewis dot structure represents bonding in potassium iodide?**

- (a)  $\text{K}^+ [\text{:}\ddot{\text{I}}\text{:}]^-$
- (b)  $[\text{:}\ddot{\text{K}}\text{:}]^- \text{I}^+$
- (c)  $\text{K}:\ddot{\text{I}}:$
- (d)  $:\ddot{\text{K}}:\ddot{\text{I}}$

**8- The idea behind “covalent drugs” in treating viruses is based on:**

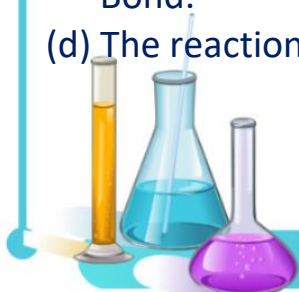
- (a) Forming temporary ionic bonds with the virus protein.
- (b) Covalent bonding with the virus protein to inhibit its action.
- (c) Increasing the molecular mass of the virus to make it easier to detect.
- (d) Breaking covalent bonds within the infected cell.

**9-The device used to estimate the molecular mass of a covalent drug before and after it binds to the virus protein is:**

- (a) An electron microscope.
- (b) A mass spectrometer.
- (c) An atomic absorption spectrometer.
- (d) A sensitive balance.

**10- Which of the following reactions is expected to be the “fastest” under standard conditions?**

- (a) The reaction of hydrogen gas molecules with chlorine gas molecules to form a Polar HCl molecule.
- (b) The reaction of sodium chloride (NaCl) solution with silver nitrate solution to form A precipitate.
- (c) The reaction of a covalent drug with a viral protein to form a permanent covalent Bond.
- (d) The reaction of methane gas ( $\text{CH}_4$ ) with oxygen (combustion).





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## WEEKLY ASSESSMENTS



إعداد:

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week

2

## Weekly assessment (Week-2)

A

### Q1/ State the scientific reason:

- 1- Most of covalent compound compounds do not conduct electricity.
- 2- Carbon dioxide molecule is nonpolar.

### Q2/Using the following elements $_{15}\text{A}$ , $_{11}\text{B}$ , $_9\text{C}$ , $_6\text{D}$

#### - Which of them can form with hydrogen?

- (1) Ionic compound .....
- (2) Polar covalent compound .....

### Q3/ The diagrams below represent Lewis electron dot- symbols of three different elements:-



-Write the chemical formulas for the possible ionic compounds.

.....

B

### Q1/ State the scientific reason:

- 1- Most covalent compounds are characterized by low boiling and melting points.
- 2- Boron trifluoride molecule is nonpolar.

### Q2/Using the following elements $_{15}\text{A}$ , $_{11}\text{B}$ , $_9\text{C}$ , $_6\text{D}$

#### - Which of them can form with hydrogen?

- (1) Non-polar covalent compound .....
- (2) Covalent compound whose molecule contains three bond pairs and one lone pair .....

### Q3/ The diagrams below represent Lewis electron dot- symbols of three different elements:-



-Write the chemical formula for a molecule contains 10 lone pairs of electrons  
And 3 bond pairs

.....

.....



2- Ammonia gas dissolves in water to a greater extent than carbon dioxide gas.

**- Which of them can form with hydrogen?**

- (1) Covalent compound whose molecule contains three lone pairs and one bond pair .....
- (2) Covalent compound whose molecule contains four bond pairs.....

• W

-Write the chemical formula for a molecule contains 10 lone pairs of electrons and 3 bond pairs

