

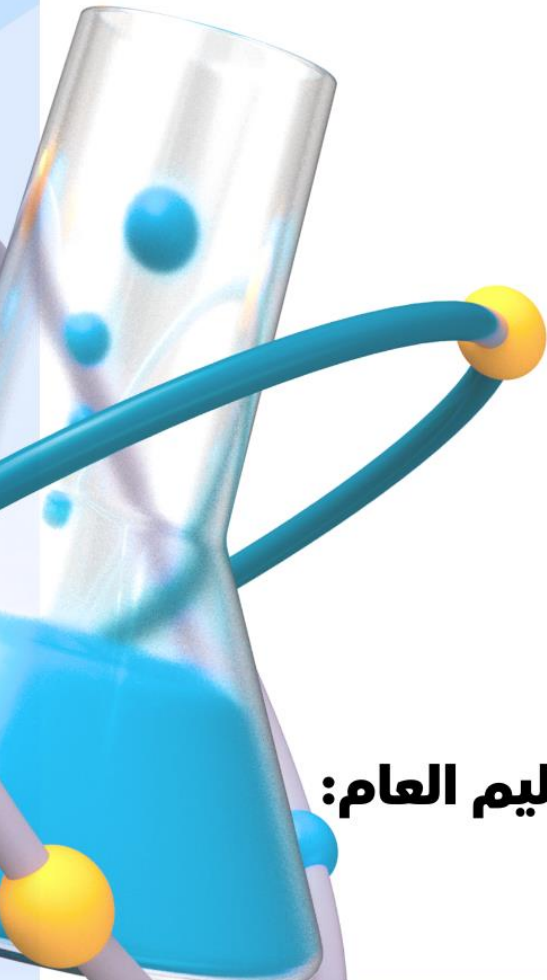
الإدارة المركزية للتعليم العام
مكتب تنمية مادة العلوم



CHEMISTRY

2nd secondary
Second term

HOME PERFORMANCE



إعداد:

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د. هالة عبدالسلام خفاجي

2026

week

10

Home performance (Week 10)

Q1/ choose the correct answer:-

1 - All of the following reactions produce nitric oxide, except:

- a) The reaction of nitrogen with oxygen at 3000°C using an electric arc
- b) Adding copper filings to dilute nitric acid
- c) Adding iron filings to dilute nitric acid
- d) Adding copper filings to concentrated nitric acid

2. Which of the following correctly describes the experiment and observation used to distinguish between “diluted nitric acid” and “concentrated nitric acid”?

	Experiment	Observation	
		Diluted nitric acid	Concentrated nitric acid
a)	Addition of iron	No reaction occurs (Passivity)	Reddish-brown fumes form at the mouth of the tube
b)	Addition of iron	Reddish-brown fumes form at the mouth of the tube	No reaction occurs (Passivity)
c)	Addition of copper	Reddish-brown fumes form at the mouth of the tube	No reaction occurs (Passivity)
d)	Addition of copper	Reddish-brown fumes inside the tube	Reddish-brown fumes at the mouth of the tube

3- Which of the following describes a reaction to obtain oxygen gas?

- a) Adding copper filings to dilute nitric acid and heating
- b) Heating nitric acid to a temperature below 100°C
- c) Heating nitric acid to a temperature higher than 100°C
- d) Adding copper to concentrated nitric acid and heating

4- Which of the following options represents the correct sequence of chemical Processes to obtain nitrogen dioxide gas from a nitrate salt?

- a) Adding concentrated hydrochloric acid and heating to below 100°C – condensing The resulting vapors – adding water – adding copper filings
- b) Adding concentrated hydrochloric acid and heat to below 100°C – condense the Resulting vapors – add iron filings
- c) Adding concentrated sulphuric acid and heat to below 100°C – condense the Resulting vapors – add copper filings
- d) Add concentrated sulphuric acid and heat to below 100°C – condense the resulting Vapors – add water – add copper filings



5- Which of the following represents a metal suitable for manufacturing bottles used To store concentrated nitric acid?

- a) Chromium or aluminum
- b) Copper or aluminum
- c) Iron or copper
- d) Chromium or copper

6-Which of the following uses consume 75%–85% of phosphorus production?

- a) Manufacture of lenses
- b) Manufacture of fertilizers
- c) Anti-reflective coated glass
- d) Fire detection systems

7- Which of the following oxides is added to wood and fabric products to increase Their fire resistance?

- A) As_2O_3
- B) P_2O_5
- C) Sb_2O_3
- d) N_2O_5

8- From the corresponding table:



- Which of the following represents (X, W)?

- a) (X): Cu, (W): NO
- b) (X): Fe, (W): NO
- c) (X): Cu, (W): NO_2
- d) (X): Fe, (W): NO_2

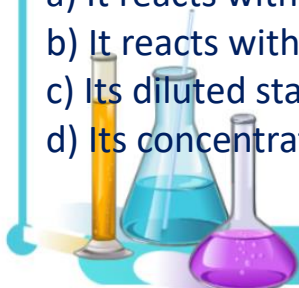
9- "The use of one of the elements in Group VA has been banned in the pesticide Industry in some developed countries since the 1970s."

-Which of the following describes a recent use of a compound of this element?

- a) The manufacture of flexible solar panels
- b) Wood preservation and protection
- c) Increasing wood's resistance to combustion
- d) Fire detection systems

10- Which of the following does not describe a property of nitric acid?

- a) It reacts with elements follow hydrogen in the chemical activity series
- b) It reacts with elements above hydrogen in the chemical activity series
- c) Its diluted state dissolves iron and releases a gas that ignites with a pop sound
- d) Its concentrated state dissolves copper and releases reddish-brown fumes



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WEEKLY ASSESSMENTS



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د. هالة عبدالسلام خفاجي

2026

week

10

Weekly assessment (Week-10)

A

Q1/ State the scientific reason: -

1- Iron displaces hydrogen from dilute nitric acid, and no hydrogen gas is Released?

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2- Bismuth-tin alloy is used in fire detectors?

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Q2/ Explain, using a balanced chemical equation, how oxygen gas can be Obtained from nitric acid.

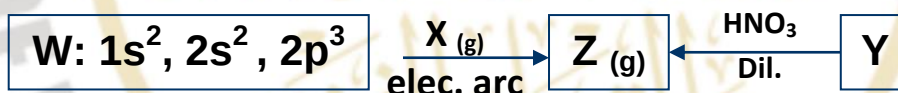
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Q3/ Choose the correct answer:

1- From the following diagram: -

-Given that gas (Z) is a nitrogen oxide in the (2+) oxidation state.



- Which of the following options represents (X, Z, Y)?

- a) X: O₂ , Z: NO , Y: Fe
- b) X: O₂ , Z: NO₂ , Y: Cu
- c) X: N₂ , Z: NO , Y: Cu
- d) X: N₂ , Z: NO₂ , Y: Fe

2-Which of the following metals produces reddish-brown fumes when reacted With concentrated nitric acid?

- a) Al
- b) Cr
- c) Cu
- d) Fe



Q1/ State the scientific reason: -

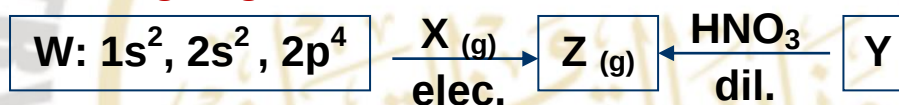
1- The reaction between concentrated nitric acid and iron stop after a Short time?

2-Nitric acid is an oxidizing agent?

Q2/ Explain, using a balanced chemical equation, how nitric oxide gas can be Obtained from nitric acid.

Q3/Choose the correct answer:

1- from the following diagram: -



If you know that gas (Z) is one of the nitrogen oxides in its (2+) oxidation state

1-Which of the following options represents (X, Z, Y)?

- a) X: O₂, Z: NO , Y: Cu
- b) X: O₂, Z: NO₂, Y: Fe
- c) X: N₂, Z: NO₂, Y: Fe
- d) X: N₂, Z: NO, Y: Cu

2-Which of the following metals react with concentrated and dilute nitric acid?

- a) Al
- b) Cr
- c) Cu
- d) Fe



Q1/ State the scientific reason: -

1- The use of arsenic in wood preservation decreased?

2- Nitric acid reacts with metals that follow hydrogen in the chemical activity series?

Q2/ Explain, using a balanced chemical equation, how nitrogen dioxide gas can be obtained from nitric acid.

Q3/ Choose the correct answer:

1- From the following diagram: -



- If you know that gas (Z) is a nitrogen oxide in the (4+) oxidation state.

- Which of the following represents (W, Z, Y)?

- a) W: NO, Z: NO₂, Y: Fe
- b) W: O₂, Z: NO, Y: Fe
- c) W: NO, Z: NO₂, Y: Cu
- d) W: N₂, Z: NO, Y: Cu

2- All of the following elements resist the effects of concentrated nitric acid except:

- a) Al
- b) Cr
- c) Cu
- d) Fe

