

Question No. 18

The correct name for the acid HCl is \_\_\_\_\_ acid

- hydrogen chloride
- hydrogen chlorate
- hydrogen chlorite
- hydrochloric

D

Question No. 3

Which of the following is an ionic compound?

- LiBr
- PCl<sub>3</sub>
- CCl<sub>4</sub>
- CO<sub>2</sub>

A

**Question No. 2**

Carbon monoxide is considered \_\_\_\_\_

- an atomic element
- a molecular compound
- a molecular element
- an ionic compound

B

Question No. 21

What is the oxidation number of carbon in  $\text{Na}_2\text{CO}_3$ ?

- 0
- +4
- +2
- +1

B

**Question No. 17**

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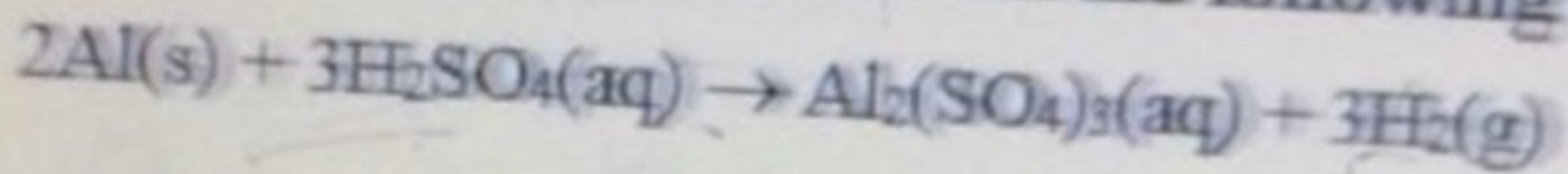
**Use the periodic table to answer the following question:  
The formula  $\text{CCl}_4$  has a molar mass of \_\_\_ g/mol.**

- 140
- 150
- 146
- 154

D

Question No. 8

Which one of the following is oxidized in the following equation?



- $\text{Al}_2(\text{SO}_4)_3(aq)$
- $\text{H}_2(g)$
- $\text{Al}(s)$
- $\text{H}_2\text{SO}_4(aq)$

C

Total questions in exam: 25 | Answered: 0

Question No. 22

The oxidation number of iodine in  $\text{KIO}_4$  is

-7

+7

-1

+1

B

Question No. 13

5.32 moles of CaO contains \_\_\_\_\_ grams of CaO.

- 245
- 532
- 123
- 298

**D**

grams of CaO = moles x molar mass  
 $5.32 \text{ moles} \times (40 + 16) \text{ g/mol} = 298 \text{ g}$



Question No. 14

How many molecules are in 237 g (about a cup) of water?

- 13.1
- $6.02 \times 10^{23}$
- $7.93 \times 10^{24}$
- 4267

C

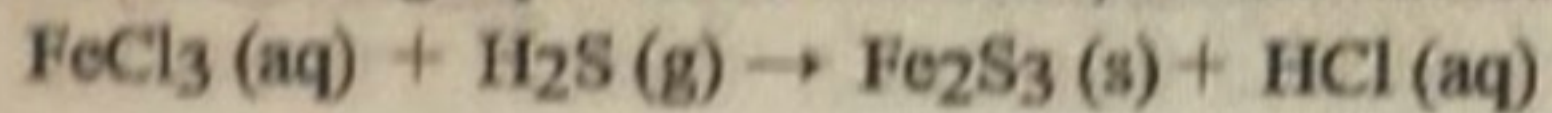
mol = grams / molar mass

molar mass of H<sub>2</sub>O = 18g/mol

Number of Molecules = moles x  $6.022 \times 10^{23}$

Question No. 5

When the following equation is balanced, the coefficient of  $\text{H}_2\text{S}$  is \_\_\_\_\_.



- 1
- 3
- 5
- 2

**B**

## Question No. 7

What is the term for the pairs of valence electrons that are not shared in a molecule?

- lone pairs of electrons
- bonding electrons
- sharing electrons
- core electrons

A

**Question No. 16**

Write the name for FeS

- iron(II) sulfate
- iron(II) sulfide
- iron(I) sulfate
- iron(I) sulfide

B

Question No. 23

Molarity is defined as:

- moles of solute per liters of solution
- moles of solute per kilograms of solute
- grams of solute per moles of solvent
- grams of solute per liters of solution

A

Question No. 5

Which of these compounds is most likely to be covalent? \_\_\_\_\_

- $\text{NF}_3$
- $\text{CaO}$
- $\text{CaOH}$
- $\text{Sr}(\text{NO}_3)_2$

A

**Question No. 19**

**Calculate the molar mass of  $\text{Fe}_3(\text{PO}_4)_2$ .**

- 262.5 g/mol
- 525.1 g/mol
- 237.6 g/mol
- 357.5 g/mol

D

Total questions in exam: 25 | Answered: 1

Question No. 2

In which of these substances are the atoms held together by polar covalent bonding?

- ClF
- S<sub>8</sub>
- CsCl
- SrCl<sub>2</sub>

A



## Question No. 6

What is the maximum number of covalent bonds that a carbon atom can form?

- 4
- 2
- 0
- 1

A

Question No. 20

Which of these compounds is a weak electrolyte?

- ionic salt
- weak base
- strong acid
- strong base

B

16

What is the charge on Fe in FeO?

2+

1+

2-

3+

A

$$\text{FeO} = 0$$

$$\text{O} = -2$$

$$\text{Fe} - 2 = 0$$

$$\text{Fe} = +2$$

**Question No. 4**

Which of the following symbols indicates an aqueous

- (s)
- (g)
- (l)
- (aq)

**D**

## Question No. 14

What is the correct formula for the iron(II) ion?

- Fe<sup>2-</sup>
- Fe<sup>+</sup>
- Fe<sup>3+</sup>
- Fe<sup>2+</sup>

D

Question No. 21

The oxidation number of N in  $\text{NaNO}_3$  is

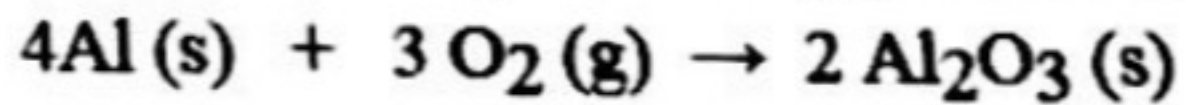
- +6
- +3
- 3
- +5

D

Total questions in exam: 25 | Answered: 0

Question No. 22

Solid aluminum and gaseous oxygen react in a combination reaction to produce  $\text{Al}_2\text{O}_3$



The maximum amount of  $\text{Al}_2\text{O}_3$  that can be produced from 2.5 g of Al and 2.5 g of  $\text{O}_2$  is \_\_\_\_\_ g.

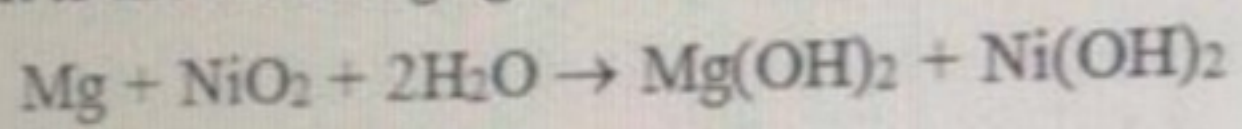
- 4.7
- 7.4
- 5.3
- 9.4

A

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## Question No. 2

What is the reducing agent in the following reaction?



- O
- Ni
- Mg
- H

C

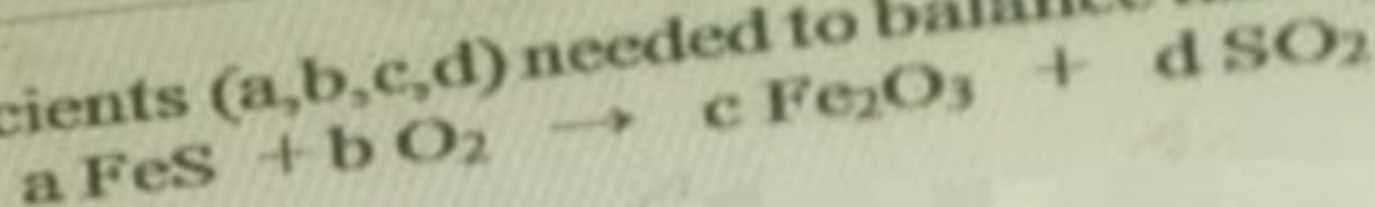




Que.

p. 21

The coefficients (a,b,c,d) needed to balance the equation below are:



- (4,7,4,2)
- (4,4,7,2)
- (7,4,2,4)
- (4,7,2,4)



Question No. 14

If 2 moles of an element are weighing 54 g, this element is most likely \_\_\_\_\_

- Aluminum with a molar mass of 27.0
- Silver with a molar mass of 108.0
- Manganese with a molar mass of 55.0
- Phosphorous with a molar mass of 31.0

**A**

$$\begin{aligned} \text{Molar mass} &= \text{grams} / \text{moles} \\ 54\text{g} / 2\text{mol} &= 27\text{g/mol} \end{aligned}$$

Question No. 20

\_\_\_\_\_ gives a nonelectrolyte aqueous solution.

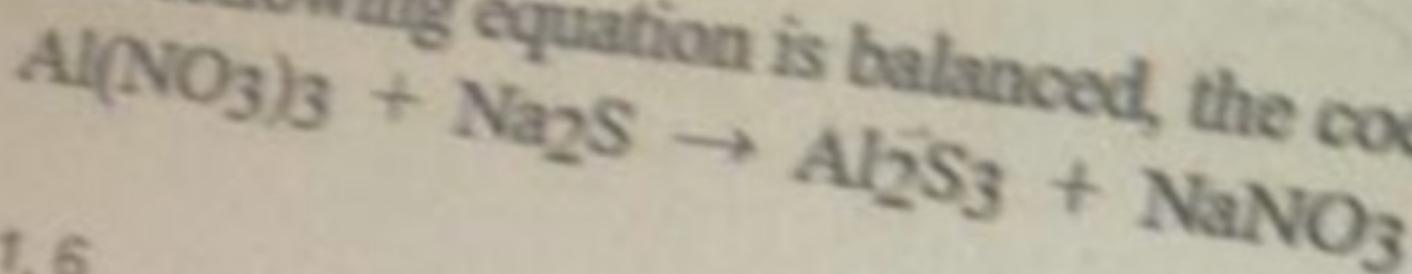
- NaOH
- NaCl
- $C_{12}H_{22}O_{11}$
- HI

C

Sucrose is nonelectrolyte

Question No. 5

When the following equation is balanced, the coefficients are \_\_\_\_\_



- 2, 3, 1, 6
- 2, 3, 2, 3
- 4, 6, 3, 2
- 2, 1, 3, 2

A

Question No. 19

The name of the chemical compound  $\text{Cu}(\text{NO}_3)_2$  is:

- copper(II) nitrite
- copper nitrate
- copper(II) nitrate
- copper(I) nitrate

C

Question No. 4

In any balanced chemical equation, the number of atoms of each element on both sides of the equation is \_\_\_\_\_

- always the same
- doubled
- increased by one
- decreased by one

A

Question No. 13

A strong electrolyte is a substance that \_\_\_\_\_ in aqueous solutions.

- partially ionizes
- completely ionizes
- does not ionize
- reacts

B

## Question No. 18

Which of the following substances can make an aqueous solution that conduct electricity?

- CO
- $MgI_2$
- $CH_3OCH_3$
- $C_{12}H_{22}O_{11}$

B



**Question No. 19**

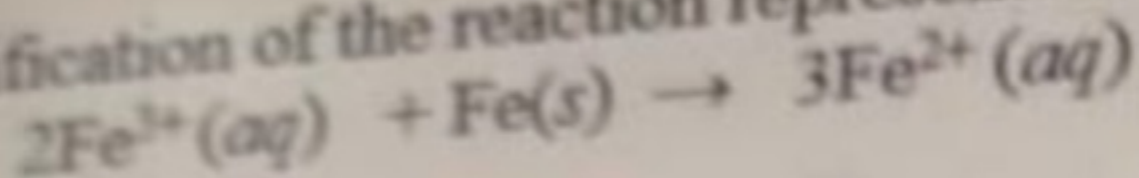
The molarity (M) of an aqueous solution containing 22.5 g of sucrose ( $C_{12}H_{22}O_{11}$ ) in 35.5 mL of solution is \_\_\_\_\_.

- 0.0657
- 3.52
- 1.85
- 0.104

C

Question No. 19

Choose the best classification of the reaction represented by the following equation:



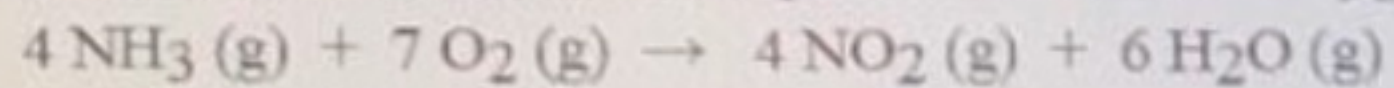
- Oxidation-reduction
- combustion
- precipitation
- acid-base

A

Total questions in exam: 25 | Answered: 0

Question No. 17

The combustion of ammonia in the presence of excess oxygen yields  $\text{NO}_2$  and  $\text{H}_2\text{O}$ :



The combustion of 43.9 g of ammonia produces \_\_\_\_\_ g of  $\text{NO}_2$ .

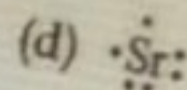
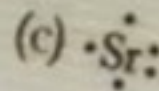
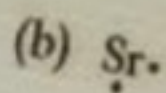
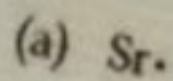
- 119
- 43.9
- 178
- 2.58



A

Question No. 9

Which of the following is the electron dot formula (Lewis structure) for an atom of strontium?



- (d)
- (b)
- (a)
- (c)

**B: (b)**

Sr in 2A group (has 2 valance electrons)

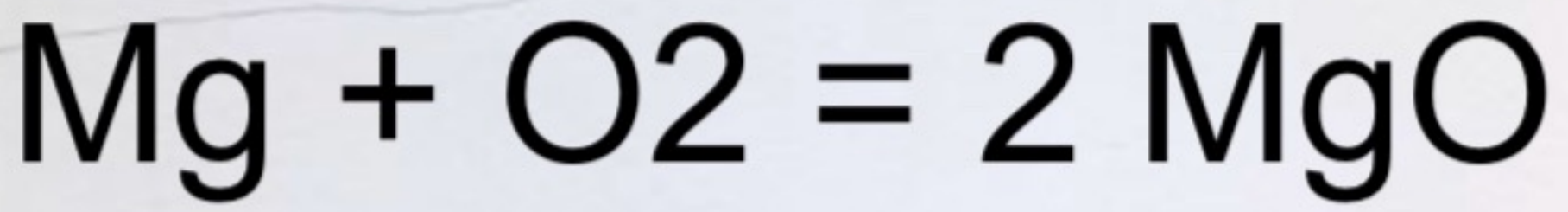
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Question No. 15

What is the chemical formula for the binary compound composed of  $Mg^{2+}$  and  $O^{2-}$  ions?

- MgO
- MgO<sub>2</sub>
- Mg<sub>2</sub>O<sub>2</sub>
- Mg<sub>2</sub>O

**A**



Question No. 6

A covalent bond is best described as \_\_\_\_\_

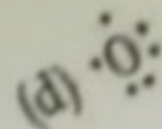
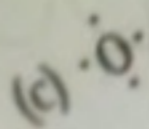
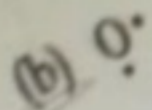
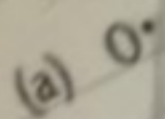
- the sharing of electrons between atoms.
- a bond between a metal and a nonmetal.
- a bond between a metal and a polyatomic ion.
- the transfer of electrons.

A

Question No. 9

Which of the following is the electron dot formula (Lewis structure) for an atom of oxygen?

- (d)
- (a)
- (c)
- (b)



A : (d)

Oxygen in 6A group  
O has 6 valance electrons

Question No. 8

The empirical formula of the compound CO is:

- CO
- $C_2O_4$
- $CO_2$
- $C_3O_6$

A

Question No. 15

The name of the  $\text{Cu}^{2+}$  ion is \_\_\_\_\_.

- copper
- copper(III)
- copper(II)
- copper(I)

C



## Question No. 21

In which species does sulfur have the highest oxidation number?

- SO<sub>2</sub>
- K<sub>2</sub>SO<sub>4</sub>
- H<sub>2</sub>S
- H<sub>2</sub>SO<sub>3</sub>

B

## Question No. 6

What is the term for a bond in which a pair of electrons is shared equally?

- electrovalent bond
- polar covalent bond
- ionic bond
- nonpolar covalent bond

D

Question No. 14

Find out the molecular formula of a compound that has a molar mass of 138.0 g/mol and an empirical formula of  $\text{NO}_2$ .

- $\text{N}_3\text{O}_6$
- $\text{NO}_2$
- $\text{N}_2\text{O}_3$
- $\text{N}_2\text{O}_4$

A

Select the element whose Lewis dot symbol is correct.

He•

•Fr•

:Te:

•Ra•

**D**

Group number determine the valance electrons  
Ra in G 2A has 2 Valance electrons

Question No. 15

What is the formula for the ionic compound formed by magnesium and iodine?

- $MgI_3$
- $Mg_2I$
- $MgI_2$
- $MgI$

C

Question No. 6

Ionic bonding is formed as a result of \_\_\_\_\_

- sharing of electrons
- loss of electrons only.
- gain of electrons only.
- transfer of electrons.

D

Question No. 17

The most correct name for the compound  $\text{SO}_3$  is:

- sulfur trioxide
- sulfur oxide
- mono sulfur trioxide
- sulfur(II) oxide

A

**Question No. 3**

Which of the following is a molecular element?

- Aluminum
- Helium
- Oxygen
- Iron

C



Question No. 14

The ionic compound that forms between potassium and oxygen is \_\_\_\_\_

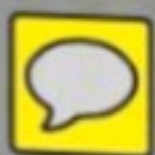
- KO
- K<sub>2</sub>O
- K<sub>2</sub>O<sub>2</sub>
- KO<sub>2</sub>

B

Question No. 23

Which one of the following pairs atoms can form a polar covalent bond?

- Ca and I
- H and Br
- S and S
- H and H



B

Question No. 20

Which of the following species has an oxidation number of zero?

- $O_2$
- $Mg^{+2}$
- $Al^{+3}$
- $Na^{+1}$

A

Question No. 21

A hydronium ion is a hydrogen ion bonded to which of the following?

- hydrogen atom
- water molecule
- hydroxide ion
- hydrogen molecule

B

Total questions in exam: 25 | Answered: 9

Question No. 23

Based on Lewis dot structure, the number of shared electrons in  $N_2$  molecule is \_\_\_\_\_

- 2
- 6
- 4
- 8

B

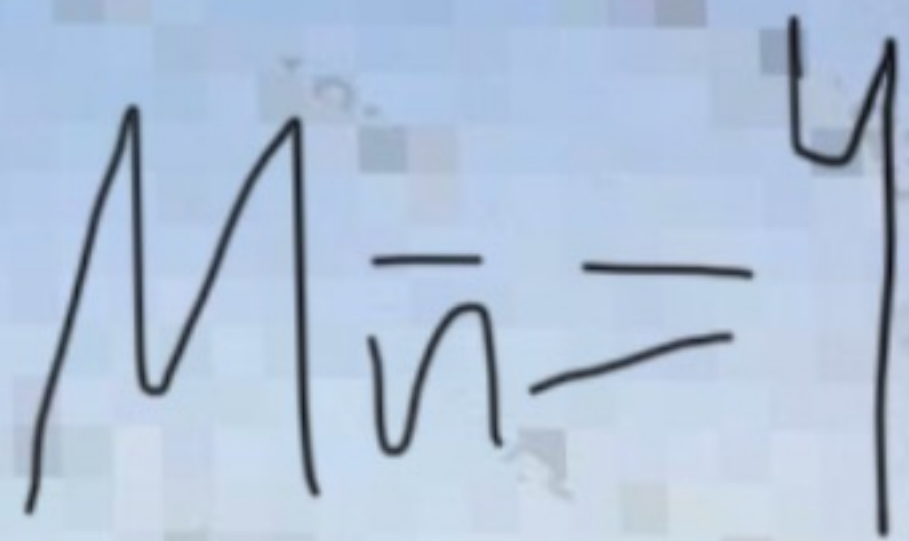
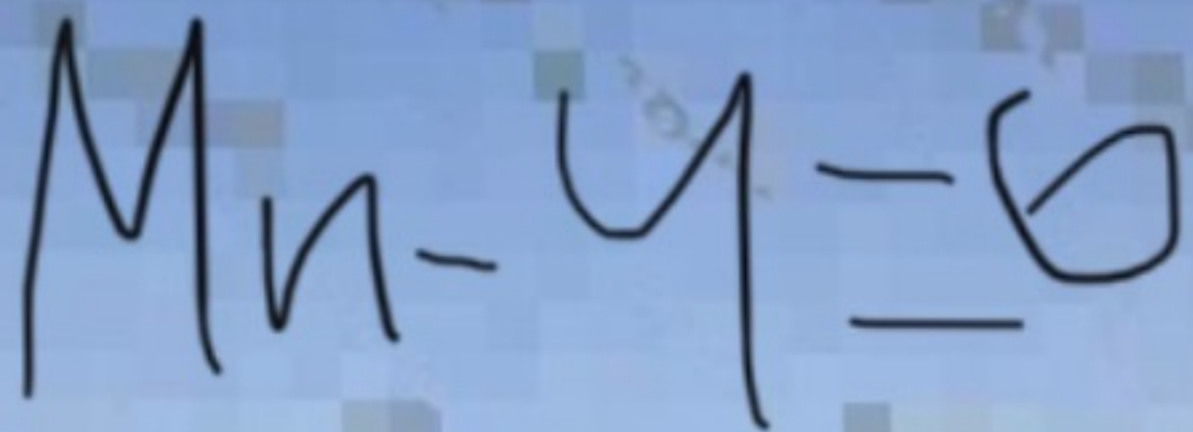


Q1

What is the oxidation number of manganese in  $\text{MnO}_2$ ?

- +2
- +4
- +1
- 0

B



Question No. 3

Fluorine is considered \_\_\_\_\_

- an atomic element
- an ionic compound
- a molecular compound
- a molecular element

D

Question No. 19

The name of the chemical compound  $\text{Al}_2(\text{SO}_4)_3$  is:

- aluminum sulfite
- aluminum(III) sulfate
- aluminum sulfate
- aluminum(III) sulfite

C

Question No. 24

What is the molarity of HCl solution prepared by diluting 600 mL of 1.0 M HCl to a total volume of 1500 mL?

- 0.1 M
- 0.4 M
- 0.2 M
- 2.0 M

**B**

$$M_2 = M_1 V_1 / V_2$$



Question No. 16

The name of the chemical compound  $\text{Cu}_2\text{O}$  is:

- Copper(I) oxide
- Copper(III) oxide
- Copper oxide
- Copper(II) oxide

A

Question No. 6

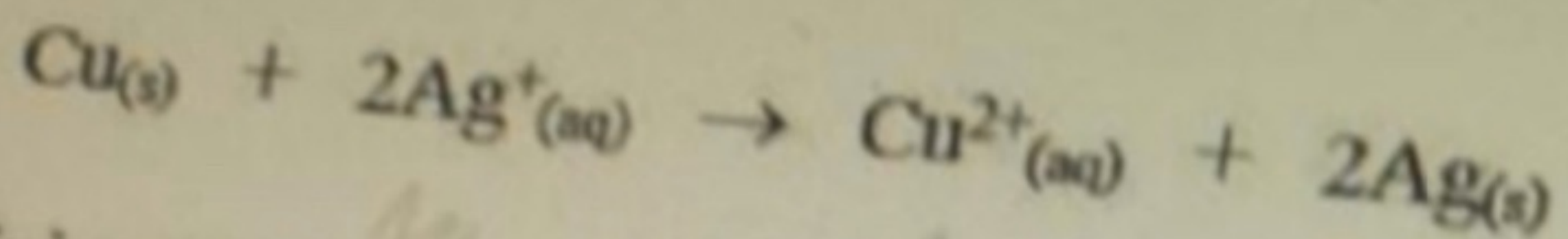
The amount of energy required to break one mole of a bond in a compound is called \_\_\_\_\_

- thermal energy
- kinetic energy
- potential energy
- bond energy

D

Question No. 16

In the reaction:



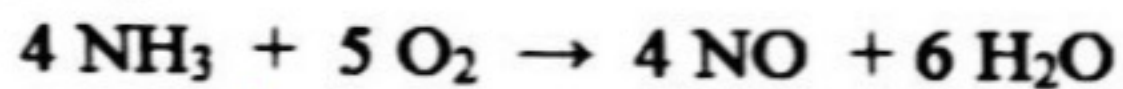
- $\text{Cu}_{(s)}$  is the oxidizing agent and  $\text{Ag}^{+}_{(aq)}$  is oxidized.
- $\text{Cu}_{(s)}$  is the reducing agent and  $\text{Ag}^{+}_{(aq)}$  is reduced.
- $\text{Ag}^{+}_{(aq)}$  is oxidizing agent and  $\text{Cu}_{(s)}$  is reduced.
- $\text{Ag}^{+}_{(aq)}$  is the reducing agent and  $\text{Cu}_{(s)}$  is reduced.

B

**Question No. 5**

---

In the reaction below, what is the theoretical yield in moles for NO when 3 moles of NH<sub>3</sub> react with 3 moles of O<sub>2</sub>?



- 2.4 mol
- 2.8 mol
- 2.6 mol
- 3.0 mol

A

Question No. 1

Which of the following statements about atoms is FALSE?

- Atoms compose all matter.
- Atoms are the basic building block of nature.
- An atom is the smallest identifiable unit of an element.
- Atoms is composed from two or more elements.

D

Total questions in exam: 25 | Answered: 0

## Question No. 16

A

Analysis of an unknown substance showed that it has a high boiling point and is brittle. It is an insulator as a solid but conducts electricity when melted. Which of the following substances would have those characteristics?

- CO
- KBr
- Al
- HCl

A large, handwritten number '16' in black ink, indicating the selected answer for Question No. 16.

Which molecule contains the longest carbon-carbon bond?

- Ⓐ  $F_2C=CF_2$
- Ⓑ  $HC=CH$
- Ⓒ  $H_3C-CH_3$
- Ⓓ  $H_2C=CH_2$

C

single bond is long and weak

Question No. 18

The correct name for the acid  $\text{HBr}$  is \_\_\_\_\_ acid

- hydrobromic
- hydrogen bromide
- hydrogen bromine
- hydrogen bromate

A



## Question No. 15

The name of the chemical compound  $\text{CuO}$  is \_\_\_\_\_

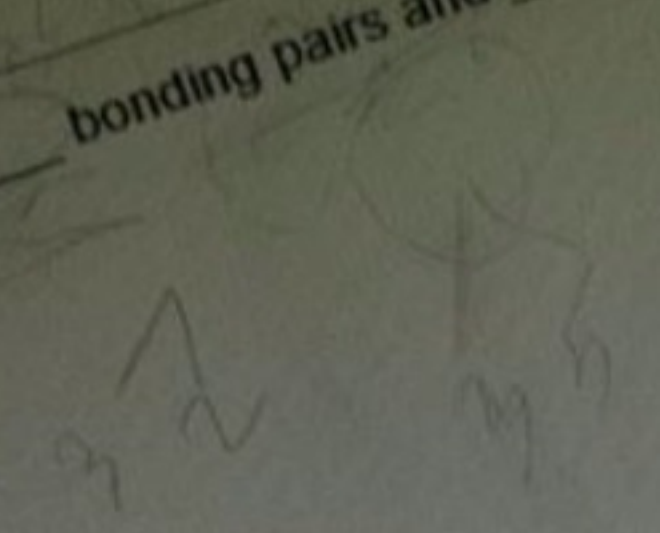
- Copper oxide
- Copper(II) oxide
- Copper(I) oxide
- Copper(III) oxide

**B**

Question No. 10

The Lewis dot structure of water molecule has \_\_\_\_\_ bonding pairs and \_\_\_\_\_ lone pairs of electrons.

- 4, 4
- 4, 2
- 2, 4
- 2, 2



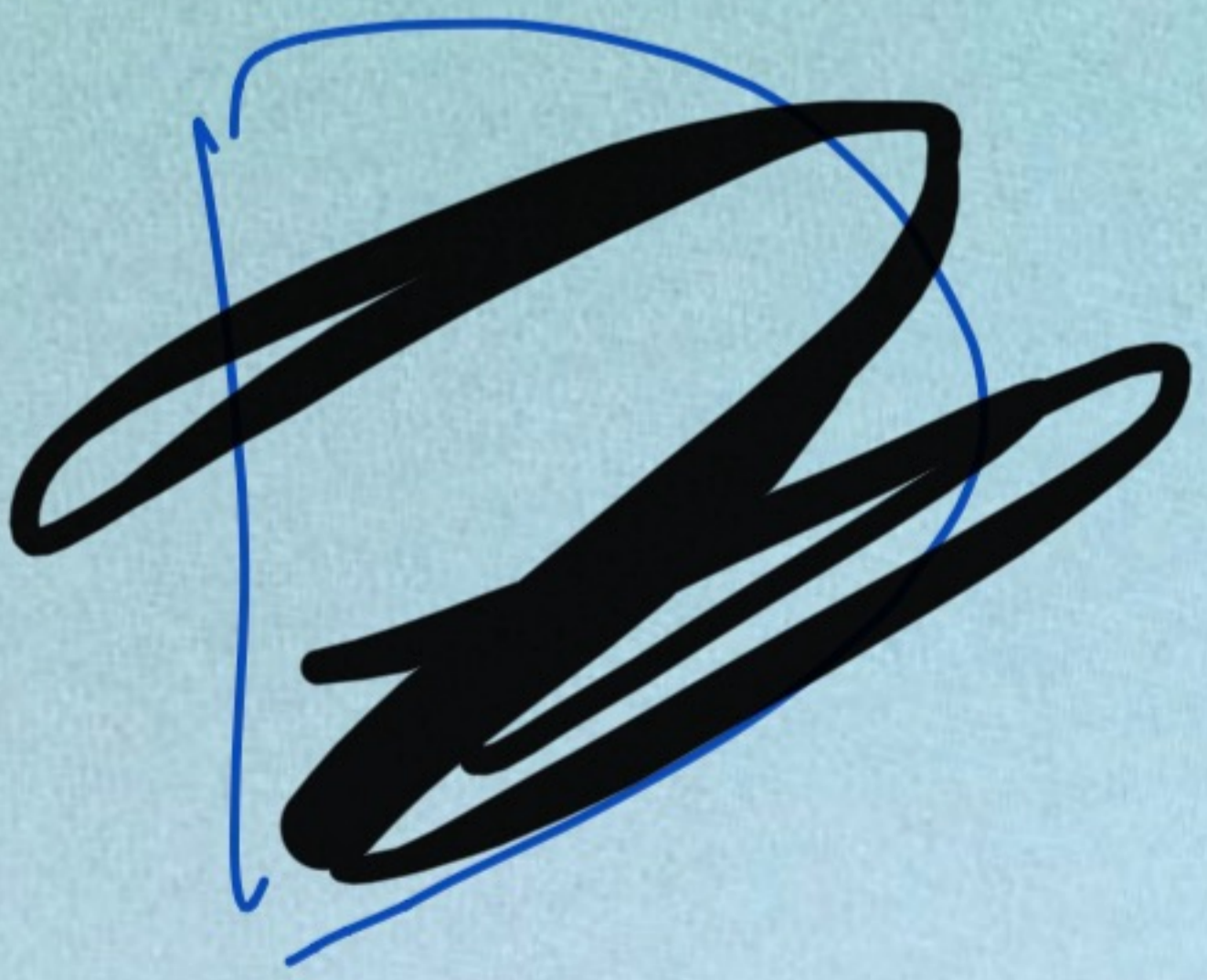
D

H2O

Question No. 18

The name of the chemical compound  $\text{CuOH}$  is \_\_\_\_\_.

- copper(II) hydroxide
- copper(III) hydroxide
- copper(I) hydroxide
- copper hydroxide



Question No. 20

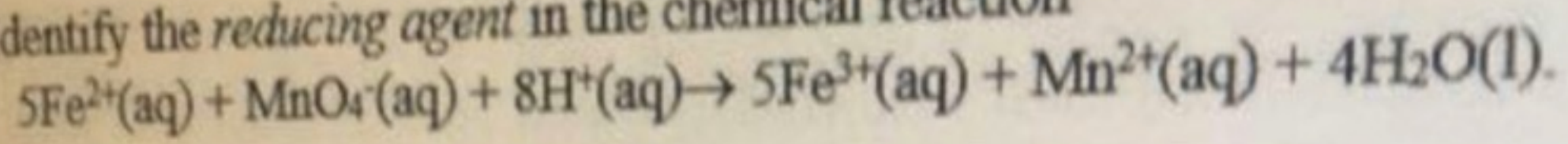
In an oxidation-reduction reaction, the oxidized substance always \_\_\_\_\_

- shows loss of electrons.
- shows gain of electrons.
- shows gain of neutrons.
- gives up hydrogen atoms.

A

Question No. 21

Identify the *reducing agent* in the chemical reaction



- $\text{Mn}^{2+}$
- $\text{Fe}^{2+}$
- $\text{MnO}_4^{-}$
- $\text{Fe}^{3+}$

B

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Question No. 20

What is the molecular formula of a compound that has a molar mass of 300 g/mol and its empirical formula is  $\text{CH}_2\text{O}$ ?

- $\text{C}_2\text{H}_4\text{O}_2$
- $\text{C}_4\text{H}_8\text{O}_4$
- $\text{C}_3\text{H}_6\text{O}_3$
- $\text{C}_{10}\text{H}_{20}\text{O}_{10}$



The number which is located on the LEFT of a chemical formula that helps to balance a chemical equation is called \_\_\_\_\_

- exponent
- subscript
- superscript
- coefficient

D

What is the oxidation number of carbon in  $\text{CO}_3^{2-}$  ?

- +2
- +4
- 2
- +6

B

Question No. 15

What is the charge on the Fe ions in  $\text{Fe}_2\text{O}_3$ ?

- 1+
- 2-
- 3+
- 2+

Save &amp; Next



Question No. 12

The mass % of Al in aluminum sulfate ( $\text{Al}_2(\text{SO}_4)_3$ ) is \_\_\_\_\_.

- 21.93%
- 45.7%
- 7.88%
- 15.77%

D

mass % of Al = molar mass of AL / total molar mass x100

Question No. 9

Which of the following has the greatest number of unshared pairs of electrons?

- C
- He
- H
- F

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D

Question No. 20

When dissolved in water,

\_\_\_\_\_ can make aqueous solution that conduct electricity.

- $\text{CH}_3\text{OCH}_3$
- sugar
- $\text{C}_8\text{H}_{18}$
- ionic salt

D

Question No. 6

A triple covalent bond contains \_\_\_\_\_ of electrons.

- 4 pairs
- 2 pairs
- 1 pair
- 3 pairs

D

Question No. 2

Which family of the periodic table is most likely to form diatomic molecules?

- Group 5A
- Group 7A
- Group 6A
- Group 8A

B

**Question No. 5**

Short bonds are usually ..... , while the long bonds are .....

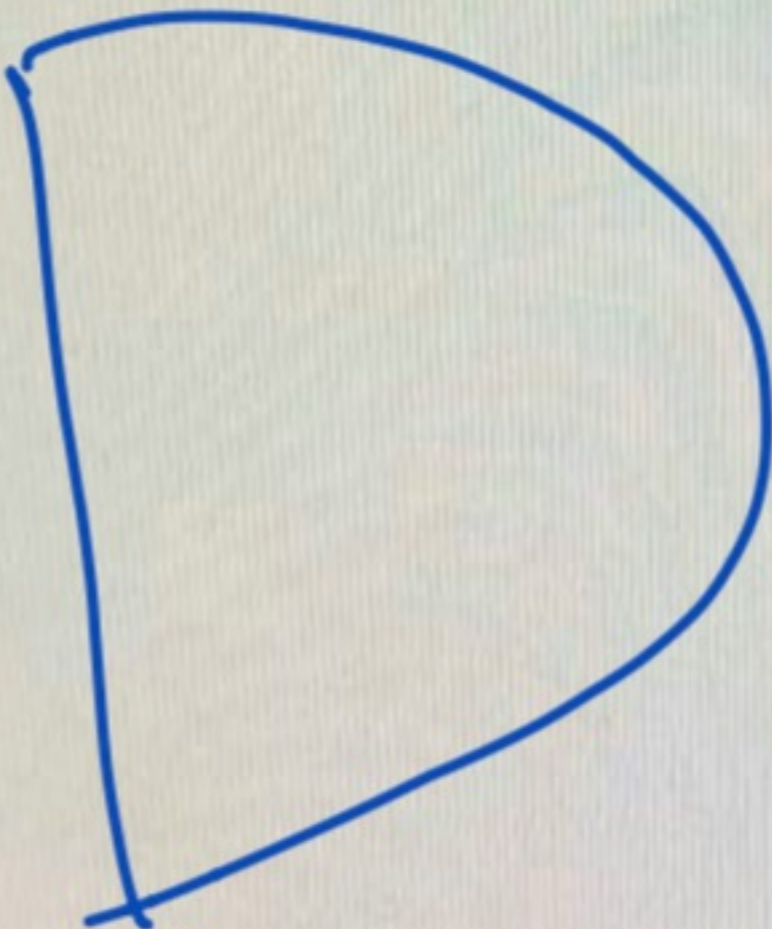
- Strong, weak
- Weak, weak
- Weak, strong
- Strong, strong

FA

Question No. 21

In an oxidation-reduction reaction, the reduced substance always \_\_\_\_\_

- takes on oxygen atoms.
- gives up hydrogen atoms.
- shows loss of electrons.
- shows gain of electrons.



Question NO. 8

For a given reaction



When 10 moles of  $\text{V}_2\text{O}_5$  are mixed with 10 moles of Ca, which is the limiting reactant according to the above equation?

- $\text{V}_2\text{O}_5$
- CaO
- Ca
- V

C



Question No. 16

What is the oxidation number of sulfur in  $\text{SO}_3^{2-}$ ?

- +4
- +6
- +2
- 2

A



Question No. 7

What is the term for the distance between the nuclei of two atoms that are held together by a covalent bond?

- atomic length
- bond energy
- intermolecular distance
- bond length

D

**Question No. 3**

Which of the following is an atomic element?

- nitrogen
- calcium
- hydrogen
- bromine

**B**

Question No. 20

When dissolved in water, a \_\_\_\_\_ gives an aqueous solution that does not conduct electricity.

- weak base
- strong base
- strong acid
- sugar

D

## Question No. 6

An ionic compound \_\_\_\_\_

- contains only cations.
- has a net negative charge.
- has a net positive charge.
- has a net charge of zero.

D

**Question No. 6**

How many covalent bonds will an oxygen atom normally make?

- 4
- 1
- 2
- 3



The ability of an atom to attract the shared electrons in a covalent bond is called \_\_\_\_\_

- Bond energy
- electronegativity
- bonding ability
- polarity

**B**

## Question No. 21

The substance that causes the reduction of another substance is called:

- reducing agent
- oxidizing agent
- cathode
- anode

A

\_\_\_\_\_



Question No. 12

Oxidation cannot occur without \_\_\_\_\_

- reduction
- air
- water
- acid

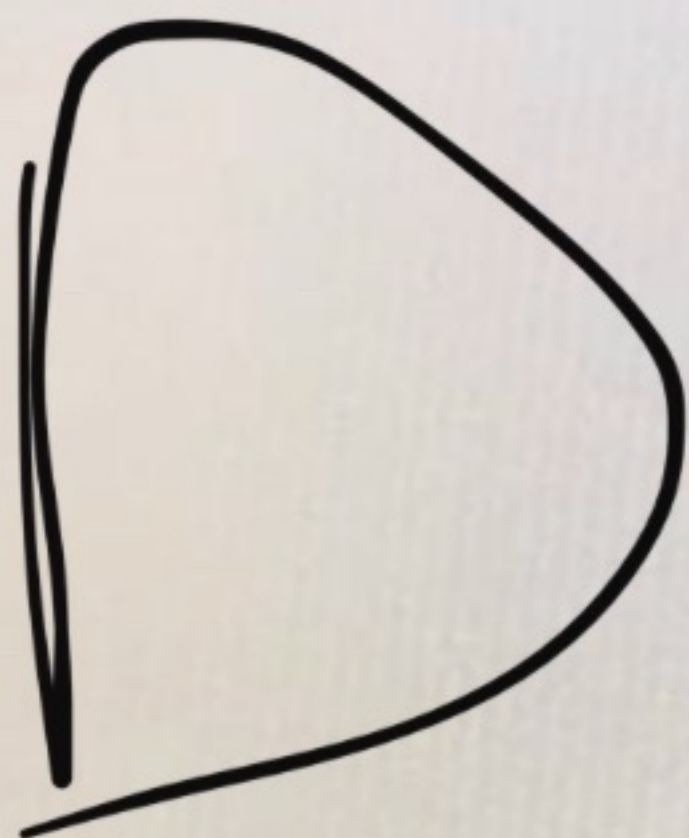
**A**

Total questions in exam: 25 | Answered: 0

## Question No. 10

What is the percent yield for a reaction if its theoretical yield is 144 g and its actual yield is 46 g?

- 53%
- 22%
- 60%
- 32%



Which of the following compounds gives a strong electrolyte aqueous solution?

- HI
- $\text{NH}_3$
- $\text{C}_6\text{H}_{12}\text{O}_6$
- $\text{CH}_3\text{COOH}$

A

HI is strong acid

Question No. 19

The name of the chemical compound  $\text{MgSO}_4$  is:

- magnesium(II) sulfate
- magnesium sulfate
- magnesium(II) sulfite
- magnesium sulfite

**B**

Question No. 18

Which of the following is a polyatomic ion?

- $\text{Br}^{1-}$
- $\text{S}^{2-}$
- $\text{NO}_3^{1-}$
- $\text{Na}^{1+}$

C

Which one of the following elements forms two or more ions with different charges?

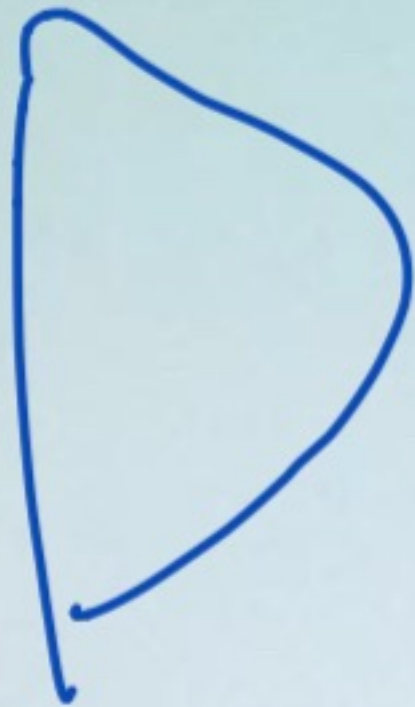
- Fe
- K
- O
- F

A

Question No. 17

The most correct name for the compound  $SBr_6$  is:

- sulfur bromide
- monosulfur heptabromide
- monosulfur hexabromide
- sulfur hexabromide



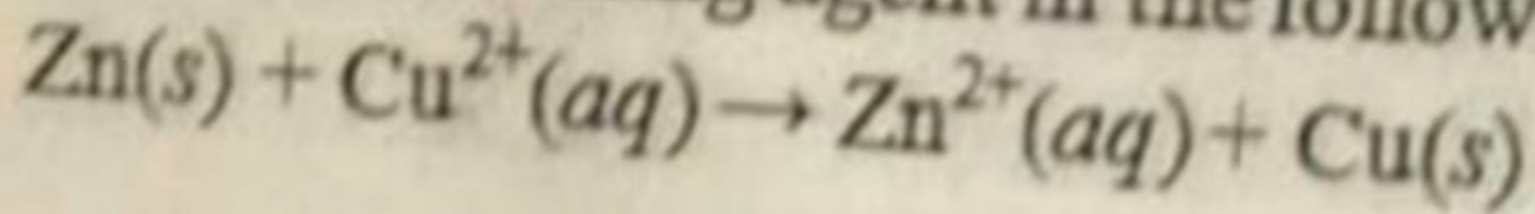
Identify HCl.

- strong electrolyte, weak acid
- weak electrolyte, weak acid
- strong electrolyte, strong acid
- weak electrolyte, strong acid

**C**



... is the oxidizing agent in the following redox reaction:



- $\text{Cu}^{2+}$
- $\text{Zn}^{2+}$
- $\text{Zn}$
- $\text{Cu}$

A

Total questions in exam: 25 | Answered: 8

Question No. 13

What is the final molarity of  $\text{HNO}_3$  solution, if 300 mL of 2 M  $\text{HNO}_3$  was diluted to a final volume of 0.2 L?

- 3.0 M
- 5.0 M
- 4.0 M
- 6.0 M

A

Which of the following polyatomic ions has a positive charge?

- sulfate ion
- carbonate ion
- hydroxide ion
- ammonium ion

D

Total questions in exam: 25 | Answered: 0

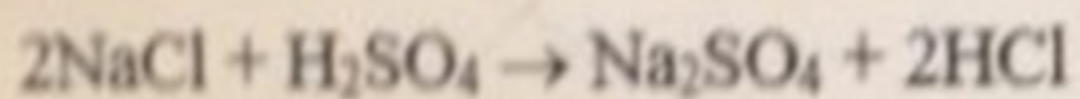
Question No. 2

A<sup>-</sup>

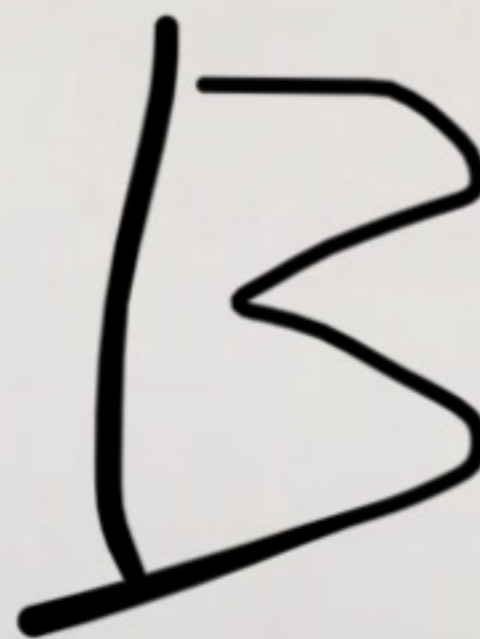
A

A<sup>+</sup>

When 22.0 g NaCl and 21.0 g H<sub>2</sub>SO<sub>4</sub> are mixed and react according to the equation below, which is the limiting reagent?



- H<sub>2</sub>SO<sub>4</sub>
- NaCl
- HCl
- Na<sub>2</sub>SO<sub>4</sub>



Save &amp; Next

Question No. 10

In the Lewis structure for  $\text{CH}_4$ , how many unshared pairs of electrons will carbon have?

- 0
- 2
- 3
- 1

A

Question No. 8

What is the empirical formula of the compound that has a composition by mass of 62% C, 10.4% H and 27.5% O?

- CHO
- CH<sub>2</sub>O<sub>3</sub>
- C<sub>3</sub>H<sub>6</sub>O
- C<sub>3</sub>H<sub>6</sub>O<sub>2</sub>

C

Percents = molar mass of element / total molar mass x 100

Question No. 15

The name of the  $\text{Cu}^+$  ion is \_\_\_\_\_.

- copper(III)
- copper(II)
- copper
- copper(I)

OD

D

Question No. 3

Which of the following elements does NOT exist as a diatomic molecule?

- carbon
- nitrogen
- hydrogen
- oxygen

A



Question No. 18

How many lone pairs of electrons are on the P atom in  $\text{PF}_3$ ?

- 3
- 1
- 2
- 0

B

Question No. 5

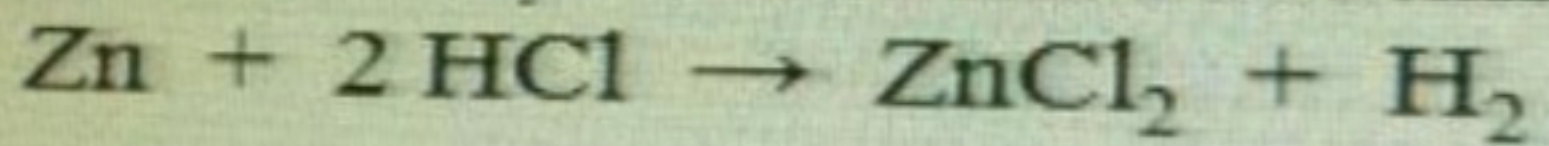
Ionic bonding is formed as a result of \_\_\_\_\_

- sharing of electrons
- gain of electrons only
- transfer of electrons
- loss of electrons only

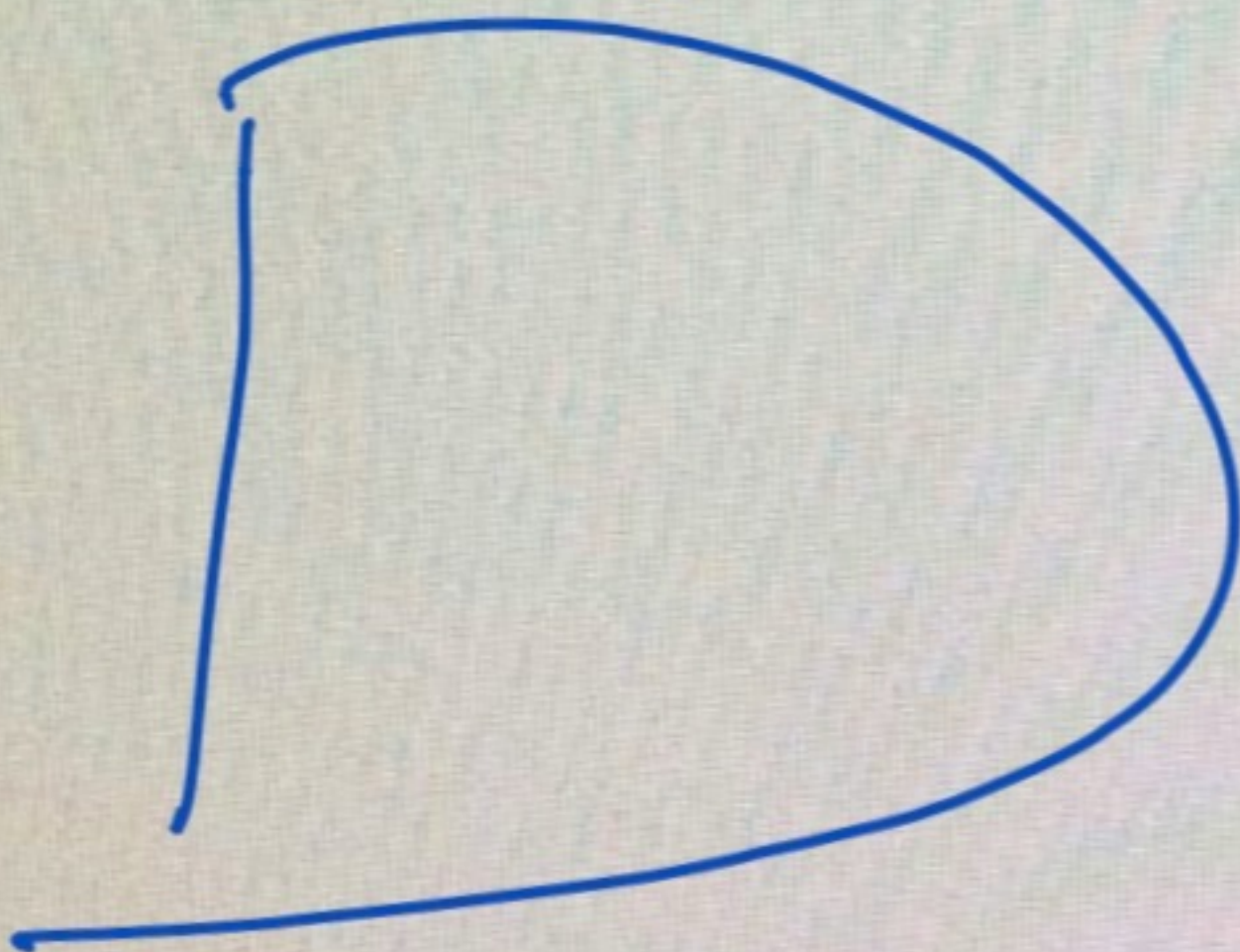


Question No. 20

In this reaction, what is the substance oxidized?



- chlorine
- hydrogen
- zinc chloride
- zinc



Question No. 7

The substance that causes the oxidation of another substance is called:

- cathode
- reducing agent
- anode
- oxidizing agent



لأنه مفروض اختار اختزال و هو موجود  
بالخيارى فالعامل المؤكسد هو نفسه اللي صار له  
اختزال

10

What is the term for the shared valence electrons in a covalent molecule?

- lone pair electrons
- nonbonding electron
- core electrons
- bonding electrons



Question No. 23

What is the molarity of a solution if 618 g of NaBr dissolved to make 1.5 L of that

- 2.0 M
- 8.0 M
- 6.0 M
- 4.0 M



Molarity = moles / volume (L)  
moles of NaBr =  $618\text{g} / 103\text{g/mol}$  (103 is molar mass)  
moles of NaBr = 6  
Molarity =  $6\text{mol} / 1.5\text{L} = 4\text{M}$

Question No. 17

The most correct name for the compound  $\text{SCl}_8$  is:

- sulfur nonachloride
- sulfur octachloride
- monosulfur octachloride
- sulfur chloride

**B**

octa = 8

## Question No. 23

What is the molarity of a solution made by dissolving 25.00 g of NaCl in enough water to make 625 mL of solution?

- 0.308 M
- 0.479 M
- 0.526 M
- 0.684 M

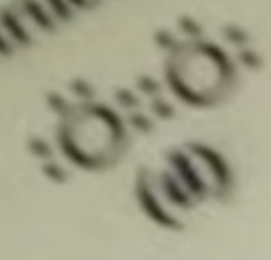
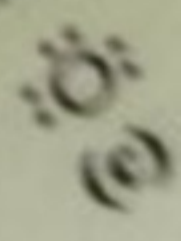
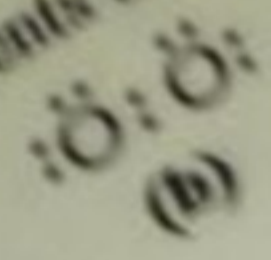
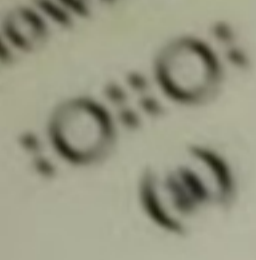
D

mol = grams / molar mass  
molarity = moles / volume (L)



Question No. 9

Which of the following represents the correct Lewis dot structure for oxygen molecule?



- (c)
- (b)
- (a)
- (d)

D

~~(a)~~

Question No. 3

All of the following elements occurs naturally as diatomic molecules EXCEPT

- chlorine
- fluorine
- neon
- iodine

C

In which of these substances are the atoms held together by polar covalent bonding?

- SrCl<sub>2</sub>
- CsCl
- ClF
- S<sub>8</sub>

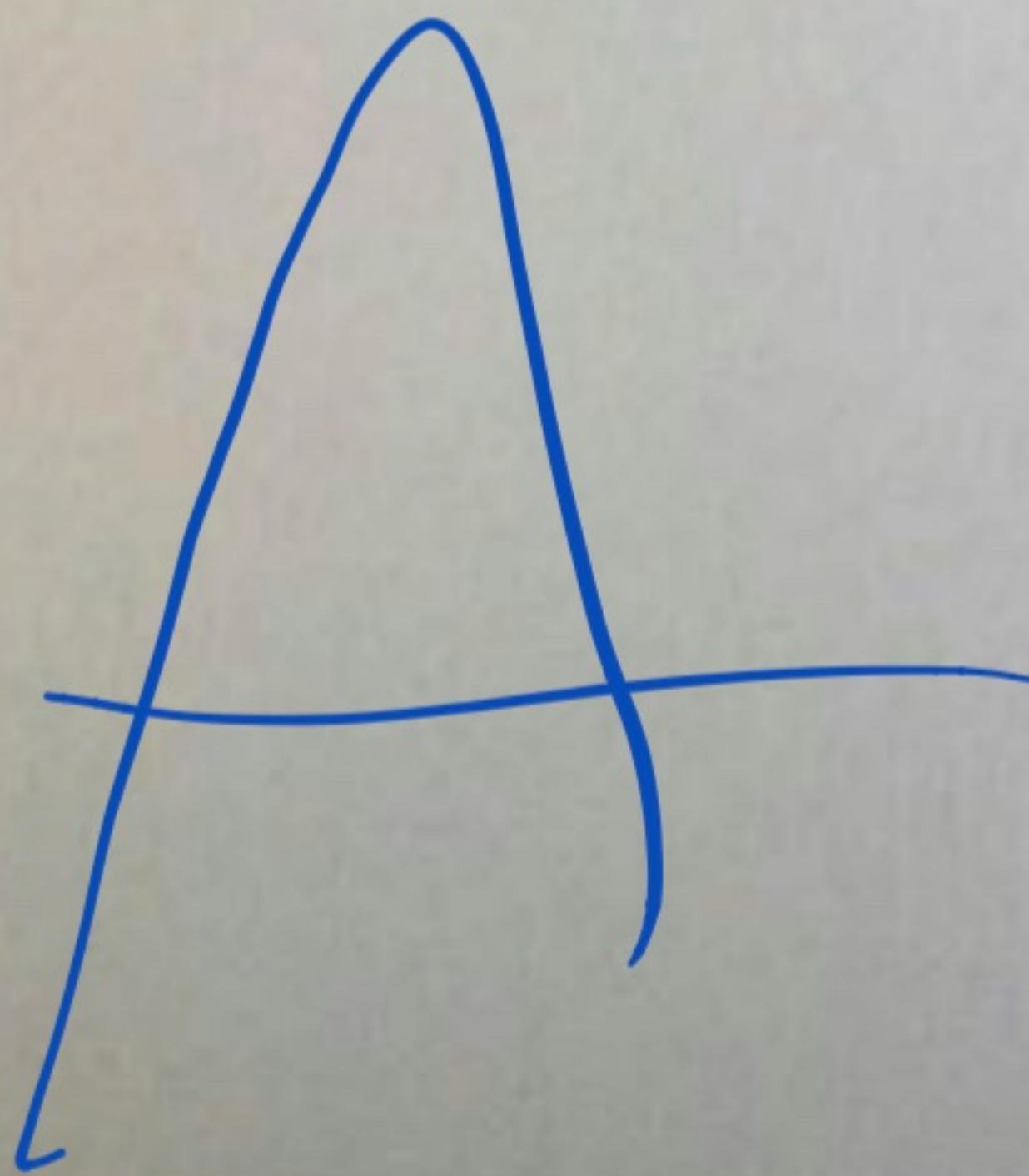
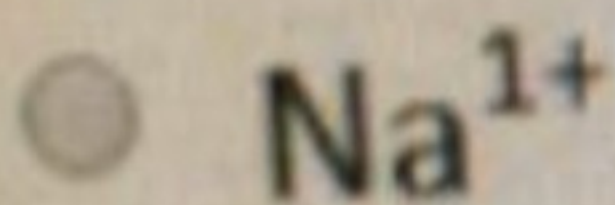
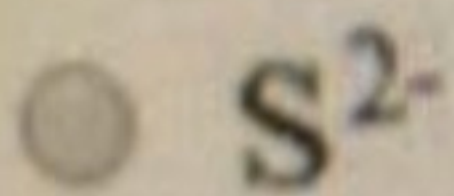
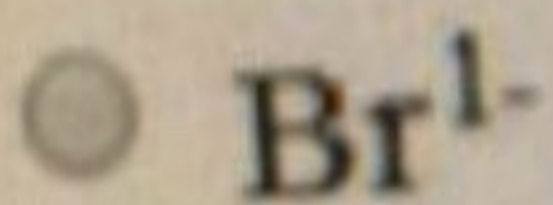
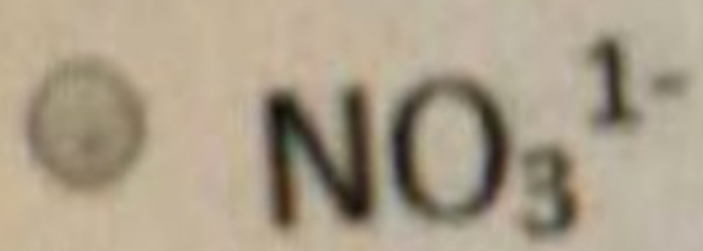
C

إذا قالك polar معناتها الجواب مركب تساهمي

وإذا قالك nonplar معناتها يكون H<sub>2</sub>,O<sub>2</sub>,N<sub>2</sub>,F<sub>2</sub>,Cl<sub>2</sub>,Br<sub>2</sub>,I<sub>2</sub>

## Question No. 11

Which of the following is a polyatomic ion?



Total questions in exam: 25 | Answered: 25

## Question No. 22

Analysis of an unknown substance showed that it has a high boiling point and is brittle. It is an insulator as a solid but conducts electricity when melted. Which of the following substances would have those characteristics?

- KBr
- CO
- HCl
- Al

**A**

1- High boiling.  
2- Insulator as a solid.  
3- Conducts electricity.  
those properties for ionic compound.

Save &amp; Next حفظ والتالي



Total questions in exam: 25 | Answered: 0

Question No. 12

In a solution, the solute is \_\_\_\_\_.

- the substance present in the greatest amount
- always water
- always a solid
- the substance present in the smallest amount

D

Save & Next

Question No. 11

What is the mass% of carbon in  $(C_2H_6O_2)$ ?

- 60%
- 7.74%
- 38.7%
- 20.6%

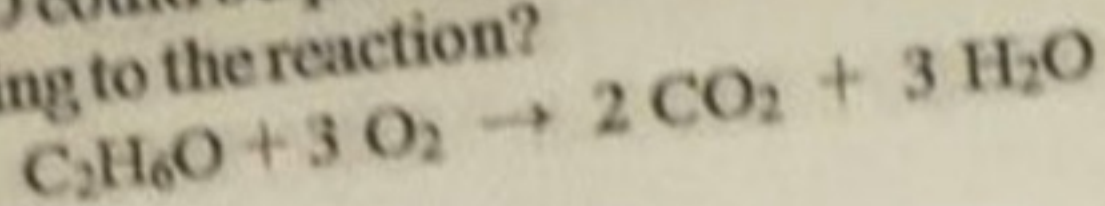
**C**

Mass % of C = Molar mass of C / total molar mass x 100  
total molar mass =  $(12 \times 2) + (1 \times 6) + (16 \times 2) = 62 \text{ g/mol}$   
mass % of C =  $24 / 62 \times 100 = 38.7\%$

Save &amp; Next حفظ والتالي

Question No. 25

How many moles of  $\text{H}_2\text{O}$  could be produced when 3 moles of  $\text{C}_2\text{H}_6\text{O}$  completely react with oxygen gas according to the reaction?



- 3 mol
- 9 mol
- 12 mol
- 6 mol

**B**



Question No. 19

The name of the chemical compound  $\text{NH}_4\text{SO}_4$  is:

- ammonium sulfate
- ammonium(I) sulfate
- ammonium(II) sulfite
- ammonium sulfite

**A**

The most correct name for the compound  $P_4S_{10}$  is:

- tetraphosphorus octasulfide
- tetraphosphorus decasulfide
- tetraphosphorus nonasulfide
- triphosphorus decasulfide

**B**

Tetra = 4  
Deca = 10

Question No. 7

The type of bond in  $I_2$  is a (an) ..... bond

- Metallic
- Polar covalent
- Nonpolar covalent
- Ionic

C

Question No. 5

When some electrons are completely transferred from one atom to another, the resulting bond is called \_\_\_\_\_

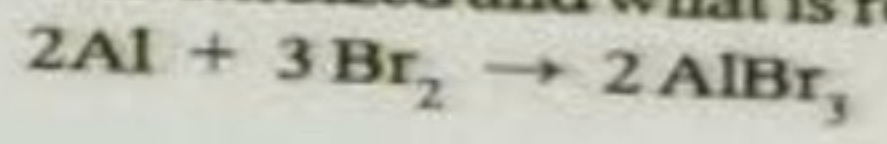
- polar ionic.
- polar covalent.
- covalent
- ionic.

D



Question No. 20

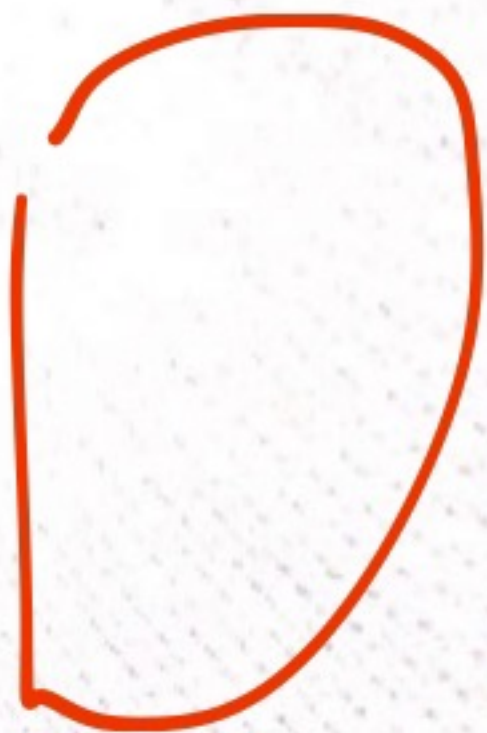
In the chemical reaction below: what is oxidized and what is reduced in the following reaction



- Al is reduced and Br<sub>2</sub> is oxidized.
- AlBr<sub>3</sub> is reduced and Al is oxidized.
- Al is oxidized and Br<sub>2</sub> is reduced.
- AlBr<sub>3</sub> is reduced and Br<sub>2</sub> is oxidized.

The most correct name for the compound  $\text{NI}_3$  is:

- mononitrogen triiodide
- nitrogen iodide
- triiodo nitrogen
- nitrogen triiodide



What is the oxidation number of nitrogen in  $\text{NO}_3^{-1}$ ?

- 0
- 5
- 3
- +5

**D**

$$\text{total charge} = -1$$

$$\text{O} = -2, \text{O}_3 = -6$$

$$-6 + \text{N} = -1$$

$$\text{N} = +5$$

Question No. 25

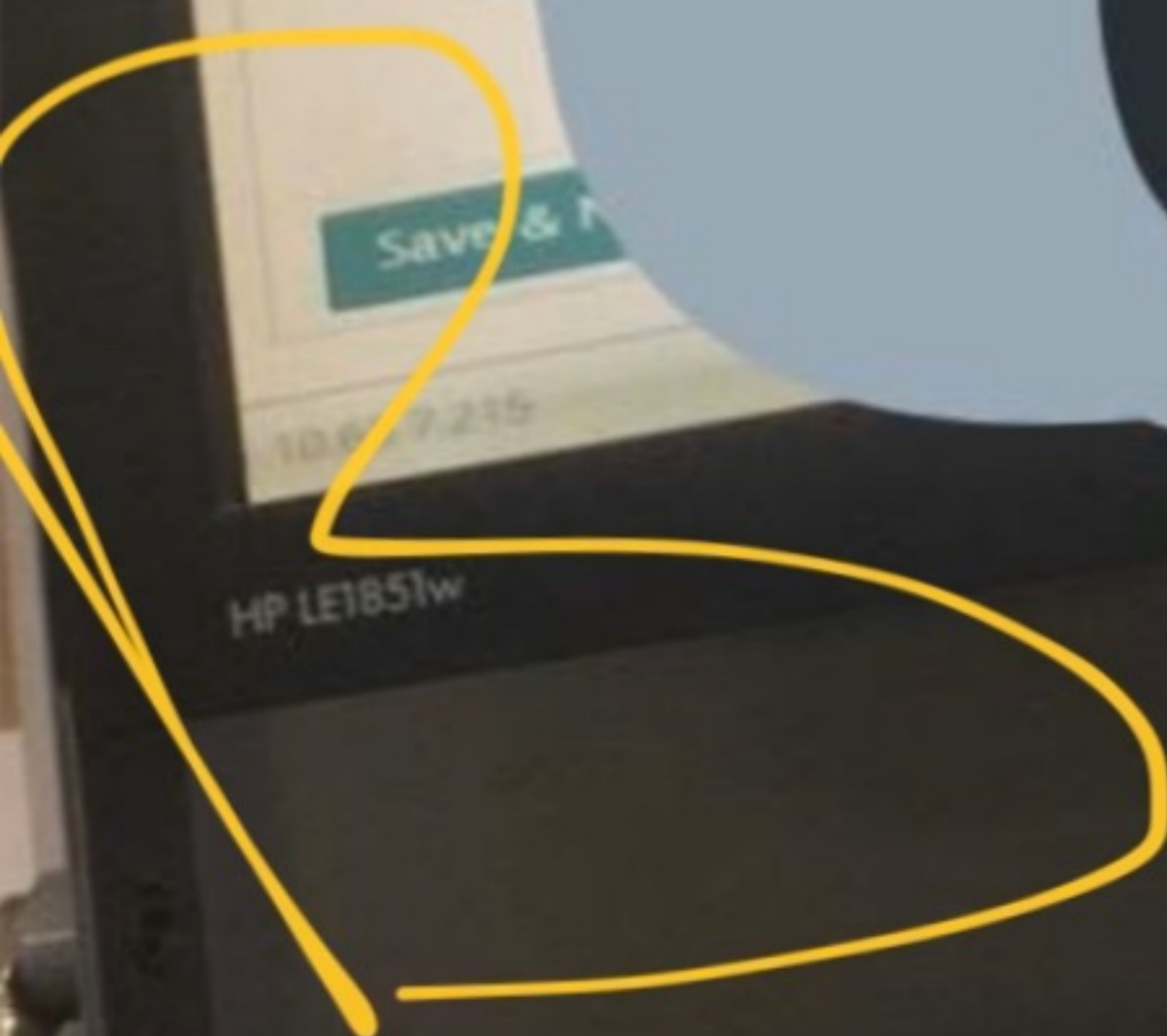
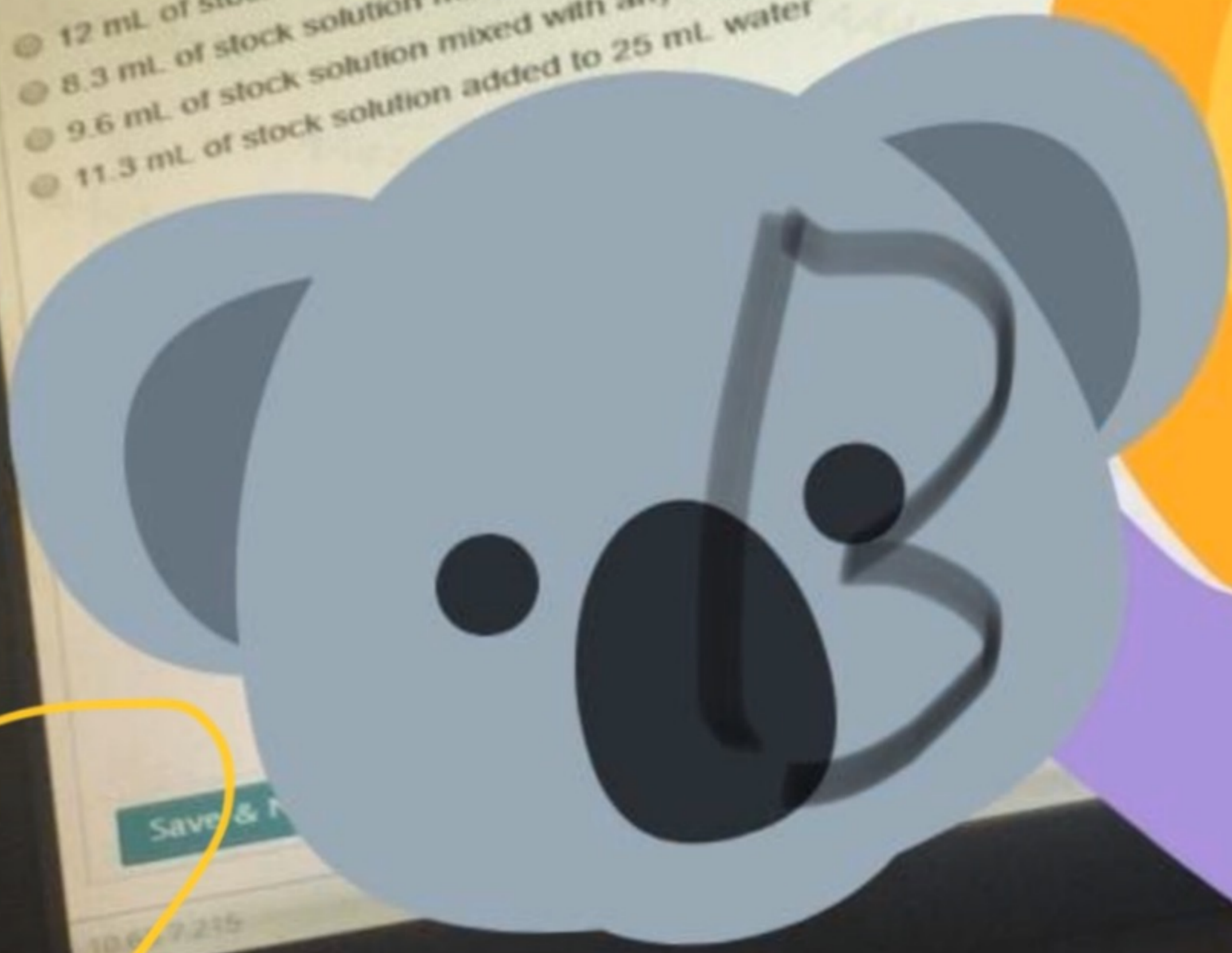
To prepare 25 mL of 0.25 M  $MgCl_2$  solution from a 0.75M  $MgCl_2$  stock solution, you should mix

- 12 mL of stock solution mixed with enough water to make 25 mL
- 8.3 mL of stock solution mixed with enough water to make 25 mL
- 9.6 mL of stock solution mixed with any amount of water
- 11.3 mL of stock solution added to 25 mL water

Save & N

10.6 7.215

HP LE1851w





Question No. 11

What is the molar mass of copper(II) sulfate,  $\text{CuSO}_4$ ?

- 16.00 g/mol
- 111.6 g/mol
- 159.6 g/mol
- 63.60 g/mol

C

Molar mass = (Cu mm) + (S mm) + (O4 mm)  
molar mass =  $63.5 + 32 + (16 \times 4) = 159.6$

Question No. 13

How many moles of RbCl are there in 71 g of RbCl?

- 1.43 mol
- 0.67 mol
- 5.32 mol
- 0.59 mol

D

moles = grams / molar mass

Save & Next حفظ و التالي

**Question No. 10**

How many valence electrons are in an oxygen atom and an oxide ion?

- 2 and 8, respectively
- 8 and 6, respectively
- 6 and 8, respectively
- 8 and 10, respectively

C

Question No. 6

A double covalent bond contains \_\_\_\_\_ shared electrons.

- one
- two
- three
- four

**D**

Question No. 17

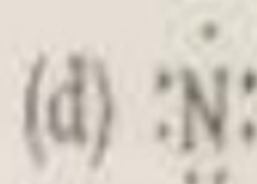
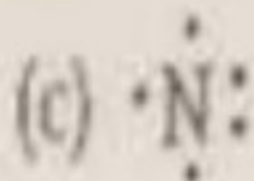
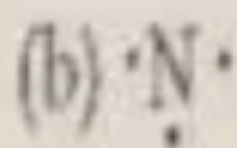
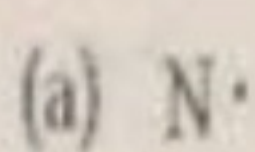
The name of the chemical compound  $\text{Cu}_2\text{CO}_3$  is:

- copper(III) carbonate
- copper carbonate
- copper(II) carbonate
- copper(I) carbonate

D

Question No. 8

Which of the following is the electron dot formula (Lewis structure) for an atom of nitrogen?



(d)

(a)

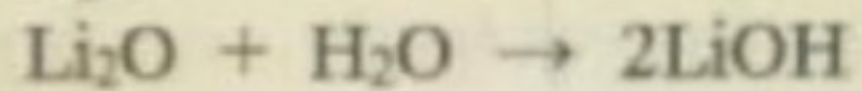
(c)

(b)



Question No. 13

In the reaction below, what is the theoretical yield in moles for LiOH when 6 grams of  $\text{Li}_2\text{O}$  react with 7 grams of  $\text{H}_2\text{O}$ ?

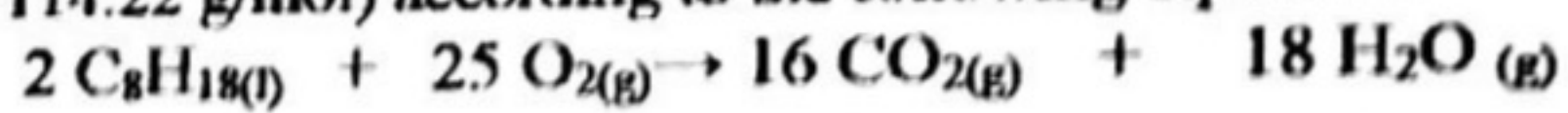


- 0.8 mol
- 0.6 mol
- 1.0 mol
- 0.4 mol

D

---

The number of  $\text{CO}_2$  molecules that are produced from burning of 57.11 g of  $\text{C}_8\text{H}_{18}$  (Molar mass = 114.22 g/mol) according to the following equation:



- $2.41 \times 10^{24}$  molecules.
- $6.02 \times 10^{23}$  molecules.
- 8 molecules.
- 16 molecules.

A



Quey

A strong electrolyte is a substance that \_\_\_\_\_ in aqueous solutions.

- partially ionizes
- completely ionizes
- does not ion
- reacts

B

Question No. 20

gives a strong electrolyte when dissolved in water.

- $C_6H_{12}$
- $H_2SO_4$
- $C_{12}H_{22}O_{11}$
- $CH_4$

B

Strong acid

Save & Next

## Question No. 7

Which of the following statements is FALSE regarding an ionic bond?

- Metal atoms lose electrons and nonmetal atoms gain electrons.
- Breaking an ionic bond between two ions requires energy.
- The ionic bond is formed between two nonmetal atoms.
- An ionic bond is the attraction between a metal ion and a nonmetal ion.

C

Question No. 22

If 7.0 moles of KI are dissolved in enough water to make 2.0 L of solution, the molarity of this solution equals \_\_\_\_\_

- 0.4 M
- 3.5 M
- 2.5 M
- 1.75 M

Chemistry\_Quiz2\_Sem2\_



**B**

Molarity = mol / volume (L)

Q. No. 10

The number of lone electron pairs in the  $N_2$  molecule is \_\_\_\_\_

- 3 pairs
- 2 pairs
- 1 pair
- 5 pairs

**B**

Question No. 7

What is the term for a bond composed of two electron pairs shared by

- single bond
- triple bond
- double bond
- electrovalent bond

C

Question No. 14

Fluorine is considered \_\_\_\_\_.

- an atomic element
- a molecular element
- a molecular compound
- an ionic compound

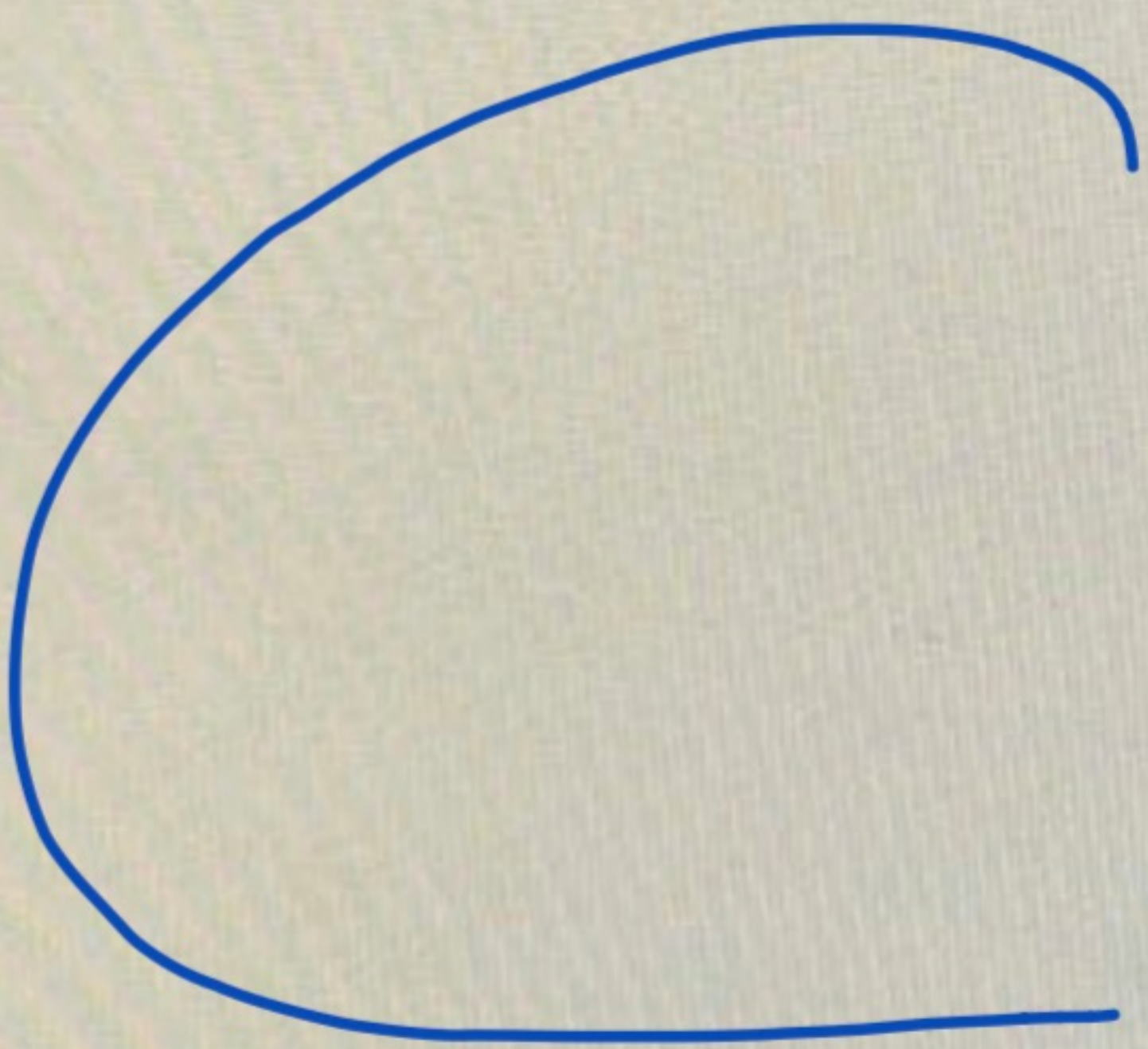
~~A~~

B

Question No. 5

A double covalent bond contains \_\_\_\_\_ of electrons.

- 3 pairs
- 4 pairs
- 2 pairs
- 1 pair

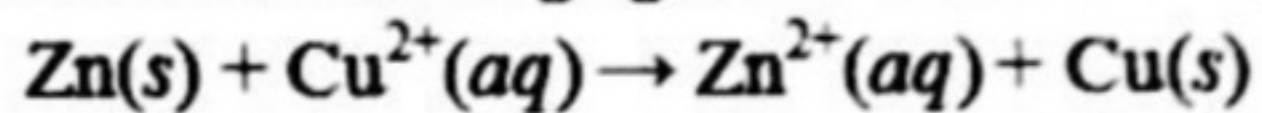




Total questions in exam: 25 | Answered: 0

Question No. 21

What substance is the reducing agent in the following redox reaction?



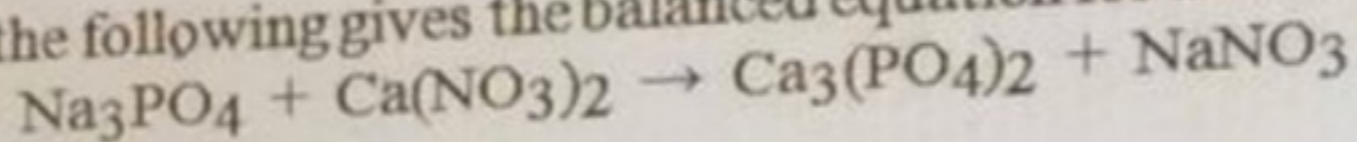
- Zn<sup>2+</sup>
- Cu<sup>2+</sup>
- Zn
- Cu

C

Total questions in exam: 25 | Answered: 2

## Question No. 1

Which of the following gives the balanced equation for this reaction?



- $\text{Na}_3\text{PO}_4 + 2\text{Ca}(\text{NO}_3)_2 \rightarrow 2\text{Ca}_3(\text{PO}_4)_2 + \text{NaNO}_3$
- $2\text{Na}_3\text{PO}_4 + \text{Ca}(\text{NO}_3)_2 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 6\text{NaNO}_3$
- $\text{Na}_3\text{PO}_4 + \text{Ca}(\text{NO}_3)_2 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 3\text{NaNO}_3$
- $2\text{Na}_3\text{PO}_4 + 3\text{Ca}(\text{NO}_3)_2 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 6\text{NaNO}_3$

**D**

Question No

The charge of hydroxide ion is ?

- 1-
- 2+
- 1+
- 2-

A

B

C



Question No. 12

Which one of the following contains 92.3% carbon by mass?

- CO<sub>2</sub>
- CH<sub>4</sub>
- C<sub>2</sub>H<sub>2</sub>
- CH<sub>3</sub>F

C

Molar mass of C<sub>2</sub>H<sub>2</sub> = (12x2) + (1x2) = 26  
percent of C = (molar mass of C / total molar mass) x 100  
percent of C = (24/26) x 100 = 92.3%

Save & Next حفظ واقللي

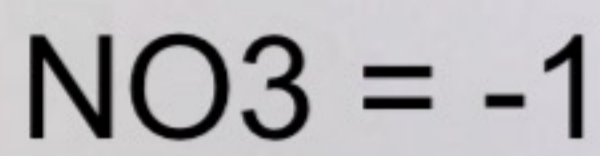
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Question No. 18

The charge of nitrate ion is \_\_\_\_\_.

- 1-
- 2-
- 1+
- 2+

A



Question No. 16

The name of the chemical compound  $\text{CuBr}_2$  is:

- Copper bromide
- Copper(II) bromide
- Copper(I) bromide
- Copper(III) bromide

B