

# Science

## Prep.1

*First Term 2025 - 2026*

# October Revision

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**Unit 1**  
**(Lesson 1 – 3)**

\* طبقاً لأخر تعديل في المادة للعام الدراسي 2025-2026



# October Revision

Mr. Ahmed Elbasha

✱ (1) Write the scientific term:

- 1) Everything that has mass and volume or occupies space. (.....)

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- 2) The building and structural unit of all matter. (.....)

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- 3) Positively charged particles found inside the nucleus of an atom. (.....)

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- 4) A subatomic particles whose charge can be neglected but whose mass cannot be neglected (.....)

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- 5) Negatively charged particles with a very small mass that revolve around the nucleus in energy levels. (.....)

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- 6) Chemical compounds used in improving agricultural production. (.....)

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- 7) The total number of protons and neutrons that make up the nucleus of an atom. (.....)

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- 8) Imaginary areas in which electrons revolve around the nucleus, each according to its energy. (.....)

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- 9) Different forms of atoms of the same element have the same atomic number but differ in their mass numbers. (.....)

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- 10) One of the subatomic particles whose charge is equal to that of an electron in amount but opposite in type. (.....)

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- 11) Elements of group 7A in the modern periodic table. (.....)

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- 12) A scientist who arranged the elements in his table in ascending order according to their atomic masses. (.....)

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- 13) A scientist who added the zero group to Mendeleev's periodic table. (.....)

- 14) The only liquid metal in the modern periodic table. (.....)
- 
- 15) Mixtures whose components can be distinguished by the naked eye (.....)
- 
- 16) Substances composed of two or more substances that are not chemically combined and their components can be separated by physical methods. (.....)
- 
- 17) Substances whose components cannot be separated by physical methods. (.....)
- 
- 18) The simplest pure form of matter that cannot be decomposed into simpler forms either by physical or chemical methods. (.....)
- 
- 19) A molecule composed of different atoms of different elements. (.....)
- 
- 20) A symbolic formula that expresses the type and number of atoms of elements that form the molecule. (.....)
- 
- 21) Properties of a substance that can be observed and measured. (.....)
- 
- 22) physical property of liquids that expresses their resistance to flow and movement of objects through them. (.....)
- 
- 23) The temperature at which a substance starts to change from a solid state to a liquid state. (.....)
- 
- 24) A transparent, low-density material, in which air makes up 99.8% of its composition (.....)

## \*(2) Choose the right answer:

1. The building and structural unit of all matter is .....  
a. clay brick                      b. molecule                      c. the atom                      d. the cell
2. The scientist who proposed the first scientific theory about the atom is .....  
a. Rutherford                      b. Dalton                      c. Mosele.                      d. Mendeleev
3. The subatomic particles that make up the nucleus of atom are .....  
a. protons and electrons                      b. neutrons and electrons  
c. protons and neutrons                      d. protons, neutrons and electrons
4. An element whose outermost energy level (L) has 6 electrons, its atomic number is .....  
a. 8                      b. 9                      c. 10                      d. 11
5. Which of the following subatomic components has a mass of 1 u ?  
a. Proton only.                      b. Electron only.  
c. Each of neutron and electron.                      d. Each of neutron and proton.
6. Which of the following atoms has number of neutrons equals twice the number of protons in it's nucleus ?  
a.  ${}^1_1\text{H}$                       b.  ${}^3_1\text{H}$                       c.  ${}^4_2\text{He}$                       d.  ${}^7_2\text{He}$
7. The electrons of an atom of an element are distributed in 3 energy levels, and the outermost energy level contains 3 electrons, while its nucleus contains 14 neutrons, its mass number is .....  
a. 3                      b. 13                      c. 14                      d. 27
8. All of the following are matter, except .....  
a. air.                      b. light.                      c. sand.                      d. table salt.
9. The mass of a proton is equal to .....  
a. 1 g.                      b. 1 kg.                      c. 1 u.                      d. 1 mg.
10. The chemical symbol of the element Sulphur is .....  
a. Si                      b. S                      c. K                      d. Ca
11. Which of the following shows the correct element and its symbol ?  
a. Sodium S                      b. Phosphorus F                      c. Magnesium Mg                      d. Potassium B
12. .... is the element that makes plant roots stronger.  
a. N                      b. K                      c. P                      d. O

13. Some fertilizers contain ..... element which is necessary for making plant leaves green.

- a. carbon                      b. phosphorus                      c. nitrogen                      d. sulphur

14. The number of negatively charged particles in an aluminum atom  ${}_{13}^{27}\text{Al}$  is .....

- a. 13                      b. 14                      c. 20                      d. 27

15. The number of nucleons in the nucleus of the element  ${}_{3}^{7}\text{X}$  is .....

- a. 3                      b. 4                      c. 7                      d. 10

16. The energy level L in the silicon atom  ${}_{14}\text{Si}$  contains .....

- a.  $2e^{-}$                       b.  $3e^{-}$                       c.  $8e^{-}$                       d.  $18e^{-}$

17. An element containing 3 electrons in its outermost energy level M has an atomic number of .....

- a. 3                      b. 5                      c. 13                      d. 15

18. The isotopes of an element are identical in all of the following, except .....

- a. atomic number                      b. number of protons.  
c. number of neutrons.                      d. number of electrons.

19. The ratio between the mass of a proton and the mass of a neutron is ..... one

- a. equal to                      b. less than                      c. greater than                      d. half

20. When an oxygen atom  ${}_{8}^{16}\text{O}$  is converted into an ion, the number of nucleons.....

- a. decreases by 2                      b. increases by 2                      c. remains 16                      d. remains 8

21. The bond in which each atom shares a single valence electron is called ..... bond

- a. ionic                      b. single covalent  
c. double covalent.                      d. triple covalent

22. The bond in ..... molecule is a triple covalent bond.

- a. hydrogen                      b. nitrogen                      c. oxygen                      d. water

23. A monovalent nonmetal element located in the second period is in the ..... block

- a. s                      b. p                      c. d                      d. f

24. Silicon and germanium are elements of the ..... block.

- a. d                      b. s                      c. f                      d. p

25. The outermost energy level of alkali elements atoms contains ..... electron (s).

- a. zero                      b. 1                      c. 2                      d. 3

26. The Lewis dot structure shows 4 unpaired electrons in the atom of .....

- a.  ${}_{4}\text{Be}$                       b.  ${}_{8}\text{O}$                       c.  ${}_{14}\text{Si}$                       d.  ${}_{16}\text{S}$

27. An element of inert gases whose outermost energy level in its atom is L has an atomic number of .....

- a. 2                                      b. 8                                      c. 10                                      d. 18

28. The alkali earth metals are located in the ..... of the periodic table.

- a. left                                      b. right                                      c. middle                                      d. bottom

29. The zero group in the modern periodic table belongs to ..... block.

- a. s                                      b. p                                      c. d                                      d. f

30. The zero group includes .....

- a. metals.                                      b. liquid nonmetals.                                      c. metalloids.                                      d. inert gases.

31. .... is a solid halogen.

- a. Fluorine                                      b. Chlorine                                      c. Bromine                                      d. Iodine

32. All periods of the modern periodic table end with .....

- a. transitional elements.                                      b. inert elements.  
c. alkaline elements.                                      d. alkaline earth elements.

33. Lanthanides belong to ..... block.

- a. s                                      b. p                                      c. d                                      d. f

34. If the outermost energy level of a halogen atom is level L, its atomic number is .....

- a. 7                                      b. 9                                      c. 17                                      d. 19

35. The valency of iodine is .....

- a. trivalent.                                      b. divalent.                                      c. monovalent.                                      d. zero.

36. The valency of argon is .....

- a. 0                                      b. 1                                      c. 6                                      d. 8

37. Element (X) is one of the alkaline earth elements and is located in the second period, its atomic number is .....

- a. 4                                      b. 7                                      c. 5                                      d. 8

38. All of the following elements are metalloids, except .....

- a. silicon.                                      b. sulphur.                                      c. boron.                                      d. arsenic.

39. All of the following are inorganic compounds, except .....

- a. blood hemoglobin.                                      b. carbon dioxide gas.                                      c. nitric acid.                                      d. water.

40. A mixture of sand and iron filings can be separated by .....

- a. filtration.                                      b. magnetic separation.  
c. heating.                                      d. electrolysis.



**\*(3) Complete the following :**

1. The atom is ..... charged in its normal state, while the nucleus is ..... charged.
2. The electrons revolve around ..... at extremely high speeds in areas known as .....
3. Protons are particles with ..... electric charge, while electrons are particles with ..... electric charge.
4. Neutrons are particles with ..... electric charge and are found inside ..... of the atom.
5. Both protons and neutrons equal in .....
6. The chemical symbol of phosphorus is ....., while the chemical symbol of mercury is .....
7. The chemical symbol of ..... element is Cu, while the chemical symbol of ..... element is Fe
8. The atom does not have neutrons when ..... is equal to .....
9. Energy level L can be saturated with ..... electrons, while energy level N can be saturated with ..... electrons.
10. Transition elements start appearing in the modern periodic table in period ..... and they belong to ..... block.
11. The elements of group 1A are known as ....., while those of group 7A are known as .....
12. Valency of an element in group 7A is ..... and the number of unpaired electrons in its outermost energy level is equal .....
13. Nitrogen element  ${}^7\text{N}$  is located in period ..... and group .....
14. The elements of alkali metals belong to the ..... block, while the halogens belong to the ..... block.
15. Lewis's model for the atom of fluorine  ${}^9\text{F}$  includes ..... unpaired electron, so its valency is .....
16. The element atom whose L energy level contains 6 electrons is located in period ..... and group .....
17. Valency of alkali metals elements is ..... while the valency of alkaline earth metals elements is .....

18. The element located in period 2, group 2A, its atomic number is ..... and belongs to the ..... block.
19. As the atomic number of group 7A elements increases, the atomic radius ..... and the melting and boiling points .....
20. An element from the alkali metals is in period 3 and has an atomic number of ....., and another element from the halogens in the same period has an atomic number of.....
21. Element  ${}_{19}^{39}\text{K}$  is in period ..... and group .....
22. The elements of the ..... block are located at the bottom of the periodic table while the elements of ..... block are located in the middle of the table.
23. Oxygen molecule  $\text{O}_2$  is an example of ..... molecules, while methane molecules ( $\text{CH}_4$ ) is an example of ..... molecules.
24. Helium gas is used to fill ....., while nitrogen gas is used to fill .....
25. Air enters the composition of aerogel at a percentage of ..... % , so it is considered a substance with ..... density.
26. When red mercury oxide is heated, it is decomposed into a ..... liquid and an ..... diatomic gas.
27. Vitamin ..... regulates the levels of calcium and ..... in the blood.
28. Mixtures are classified into ..... mixtures and ..... mixtures.
29. .... molecules are composed of identical atoms, while ..... molecules are composed of different atoms.
30. The molecule of methane consists of two elements which are ..... and .....
31. Melting point is a ..... property, while the formation of colored precipitate according to the type of reagent is a ..... property.
32. .... enters the composition of aerogel at a percentage 99.8%.

### \*(4) Correct the underlined words:

1	The chemical symbol of magnesium is <u>MG</u> .	( ..... )
2	The number of nucleons in the nucleus of the element ${}_{13}^{27}X$ equals <u>143</u> .	( ..... )
3	The number of energy levels in the heaviest atoms is <u>9</u> levels.	( ..... )
4	The number of energy levels for a negative ion is <u>greater than</u> the number of energy levels for its atom.	( ..... )
5	<u>Water</u> molecule is considered the simplest molecule of an organic compound.	( ..... )
6	<u>Neon</u> is the only liquid metal in the periodic table	( ..... )
7	The elements of d-block are known as <u>the noble</u> elements.	( ..... )
8	In Mendeleev's periodic table elements were arranged according to their <u>atomic numbers</u> .	( ..... )
9	Mendeleev discovered that the properties of elements repeated periodically at the beginning of each <u>sublevel</u> .	( ..... )
10	The melting point of lithium is <u>equal to</u> the melting point of sodium.	( ..... )
11	The elements of group 7A are called the <u>alkali</u> .	( ..... )
12	The number of elements in the modern periodic table is <u>92 elements</u> .	( ..... )
13	The elements of group 1A are similar to the elements of group <u>5A</u> in valency.	( ..... )
14	The Lewis dot structure of the oxygen atom ${}_8O$ contains <u>six</u> individual electrons.	( ..... )
15	Melting point and boiling point of halogens <u>decrease</u> by increasing atomic number.	( ..... )
16	A mixture of iron filings and Sulphur can be separated by <u>filtration</u> .	( ..... )
17	Pure substances are divided into <u>solutions</u> and compounds.	( ..... )
18	Carbon dioxide is an <u>organic</u> compound.	( ..... )
19	The molecular formula of nitric acid is <u>HNO<sub>2</sub></u>	( ..... )
20	<u>Silicon</u> is an inert gas with a less density than the density of air and it is non-flammable.	( ..... )
21	<u>Helium</u> gas is used in filling car tires.	( ..... )
22	molecule of magnesium carbonate (MgCO <sub>3</sub> ) consists of <u>four</u> atoms and <u>five</u> elements.	( ..... )
23	<u>Voltmeter</u> device is used in the electrolysis of water.	( ..... )
24	<u>A compound</u> cannot be decomposed into simpler forms.	( ..... )

\*(5) **Choose the odd word out:**

1. Protons / Neutrons / Electrons / Quantum. ( ..... )
2. Protium / Thorium / Deuterium / Tritium. ( ..... )
3. Boron/ Silicon/ Bromine/ Germanium. ( ..... )
4. Fluorine/ Chlorine/ Iodine/ Magnesium. ( ..... )
5.  $^{12}\text{Mg}$  /  $^{6}\text{C}$  /  $^3\text{Li}$  /  $^{11}\text{Na}$  ( ..... )
6. s / p / o / d / f ( ..... )
7. Krypton/ Xenon/ Nitrogen/ Radon. ( ..... )
8. Helium/ Argon/ Neon/ Hydrogen. ( ..... )
9. Melting point/ Solubility in water/ Rusting/ Density. ( ..... )
10. Plastic polymers/ Blood hemoglobin/ Methane/ Nitric acid ( ..... )
11. HCl /  $\text{CH}_4$  /  $\text{HNO}_3$  /  $\text{H}_2\text{O}$  ( ..... )

\*(6) **Put (  $\sqrt{\quad}$  ) or ( X ) :**

1. The first energy level K is saturated with 5 electrons. ( )
2. The energy of level N is less than the energy of level M. ( )
3. The charge of a proton is equal to the charge of an electron in quantity and type. ( )
4. Protons are the smallest subatomic components in terms of mass. ( )
5. The atomic number is written above the left side of the symbol of the element. ( )
6. Electrons revolve inside the nucleus in energy levels. ( )
7. The energy of the level increases as it gets closer to the nucleus. ( )
8. The higher energy levels are filled with electrons first. ( )
9. The aqueous solutions of ionic compounds conduct electricity. ( )
10. Ionic bond results in compound molecules only. ( )
11. Melting point of covalent compounds is high. ( )
12. The number of elements known so far is 118. ( )
13. The modern periodic table consists of 9 horizontal periods and 13 vertical groups. ( )
14. Elements  $^4\text{X}$ ,  $^{12}\text{Y}$ ,  $^{20}\text{Z}$  are located in the same period. ( )
15. The viscosity of water is less than that of honey, so it is more difficult to stir water than honey. ( )
16. Distinguishing between two different solutions by adding a reagent to each of them is a physical change. ( )
17. Stirring both table salt and sand in water gives a homogeneous mixture. ( )
18. The melting of ice is a Physical change. ( )
19. The density of cork is less than that of water, so it floats on its surface. ( )
20. Aerogel is characterized by high density. ( )

\*(7) **Give reasons for each of the following :**

1. Protium, deuterium and tritium are isotopes of one element.

.....

2. The nucleus of an atom is positively charged.

.....

The mass of an atom is concentrated in the nucleus.

.....

3. In an atom, the mass number is usually greater than the atomic number.

Sodium  $_{11}\text{Na}$  is an alkali metal.

.....

4. Halogens are monovalent nonmetals.

.....

5. The solution of sugar and water is considered as a homogeneous mixture.

.....

6. Wood floats on water surface, while metallic coins sink in water.

.....

7. Aerogel is used in the manufacture of jackets for researchers in Antarctica.

.....

8. Iron filings can be easily separated from flour.

.....

9. Table salt solution is a homogeneous mixture, while sand mixed with water is a heterogeneous mixture.

.....

10. Organic compounds are known as carbon compounds.

.....

11. It is easier to stir water than honey.

.....

12. Cork floats on water surface, while iron sinks in water.

.....

13. Helium gas is used in filling balloons.

.....

14. Nitrogen is used in filling car tires instead of air.

.....

15. Aluminum - Titanium alloy has a great importance

.....

**\*(8) What are the results of the following :**

1. The number of positive protons inside the nucleus is equal to the number of negative electrons revolving around it.

.....

2. Excessive use of fertilizers.

.....

3. The absence of neutrons in the nucleus. of the protium atom.

.....

4. Adding table salt to water.

.....

5. Adding sand to water.

.....

6. Heating red mercury oxide compound.

.....

7. Electrolyzing acidified water.

.....

8. Placing a piece of cork and an iron nail in water.

.....

9. Immersing a litmus paper in lemon juice.

.....

**\*(9) Problems:**

**1 State the number which indicates each of the following:**

1. Neutron mass. ....
2. The number of electrons that can fill the energy level M .....  
.....
3. The number of elements in the modern periodic table so far. ....
4. The number of periods in the modern periodic table. ....
5. The number of groups in the modern periodic table. ....
6. The number of blocks in the modern periodic table. ....
7. The number of occupied energy levels with electrons in the atom of calcium element  $_{20}\text{Ca}$  .....  
.....

**2 Illustrate with diagrams the electron configuration of the following atoms, with identifying:** • Number of protons. • Number of neutrons

1.  $^7_3\text{Li}$  .....
2.  $^{14}_7\text{N}$  .....
3.  $^{16}_8\text{O}$  .....
4.  $^{20}_{10}\text{Ne}$  .....
5.  $^{24}_{12}\text{Mg}$  .....

**3 The carbon atom contains 6 positively charged protons and 6 negatively charged electrons. What can be concluded from the previous statement.**

.....  
 .....  
 .....

**4 Illustrate with diagrams the electron configuration of the atoms  ${}_{10}^{20}\text{Ne}$  ,  ${}_{11}^{23}\text{Na}$  then identify the following for each atom :**

- (1) The number of neutrons.
- (2) The number of energy levels occupied with electrons.
- (3) The number of electrons in the outermost energy level.
- (4) The symbol of the outermost energy level.

.....

.....

.....

.....

.....

.....

**5 Determine the location of each of the following elements In the modern periodic table, and state their valencies :**

1.  ${}_{7}\text{N}$
2.  ${}_{16}\text{S}$
3.  ${}_{9}\text{F}$
4.  ${}_{19}\text{K}$
5.  ${}_{2}\text{He}$

**6 What is the atomic number of each of the following elements :**

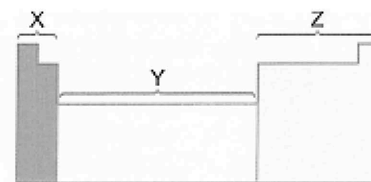
1. An element that is located in period 2 , group 6A
2. An element that is located in period 3 , group zero.
3. An element that is located in period 1 , group zero.
4. An element that is located in period 3 , group 4A

**7 Study the following figures, then answer the questions:**

The opposite figure: represents a section in the modern periodic table:

(1) What are the names of the element blocks indicated by the letters (X), (Y) and (Z) ?

(2) How many groups are in each block ?

**8 The opposite figure represents one of the groups of the modern periodic table:**

(1) What is the name of this group ? What is the valency of any of its elements ?

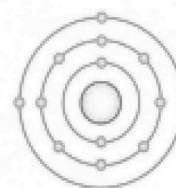
(2) Which block does this group belong to ?

X
Y
Z
L
M

**9 The opposite figure shows the electron configuration of element (X): Determine:**

1. The location of the element in the modern periodic table.

2. The block to which the element belongs.

**10 Classify the following materials into two groups, elements and compounds.**

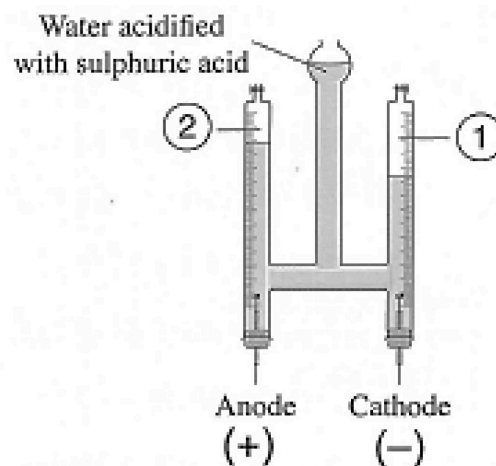
Al	CO <sub>2</sub>	N <sub>2</sub>	H <sub>2</sub> SO <sub>4</sub>
SiO <sub>2</sub>	Cu	NH <sub>3</sub>	O <sub>3</sub>

**11 From the opposite figure:**

(1) What is the name of the device shown in the figure?

What is its use?

(2) Write the items indicated by the numbers (1) , (2)



**12 Determine the number of each of the atoms and the elements in the following molecules:**

1. Oxygen molecule  $O_2$  .....
2. Ozone molecule  $O_3$  .....
3. Methane molecule  $CH_4$  .....
4. Nitric acid molecule  $HNO_3$  .....
5. Sodium hydroxide molecule  $NaOH$  .....
6. Magnesium sulphate molecule  $MgSO_4$  .....
7. Phosphoric acid molecule  $H_3PO_4$  .....

# Model Answer

## \* (1) Write the scientific term:

- |                |                  |                      |                         |
|----------------|------------------|----------------------|-------------------------|
| 1. Matter      | 8. Energy levels | 15. Heterogenous     | 21. Physical properties |
| 2. Atom        | 9. Isotopes      | 16. Mixture          | 22. Viscosity           |
| 3. Proton      | 10. Proton       | 17. Compound         | 23. Melting point       |
| 4. Neutrons    | 11. Halogen      | 18. Element          | 24. Aerogel             |
| 5. Electrons   | 12. Mosely       | 19. Compound         |                         |
| 6. Fertilizers | 13. Mosely       | 20. Chemical formula |                         |
| 7. Mass number | 14. Mercury      |                      |                         |

## \* (2) Choose the right answer:

- |      |       |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|-------|
| 1. C | 8. B  | 15. C | 22. B | 29. B | 36. A | 43. D | 50. A |
| 2. B | 9. C  | 16. C | 23. B | 30. D | 37. A | 44. C | 51. A |
| 3. C | 10. B | 17. C | 24. D | 31. D | 38. B | 45. A |       |
| 4. A | 11. C | 18. C | 25. B | 32. B | 39. A | 46. C |       |
| 5. D | 12. C | 19. A | 26. C | 33. D | 40. B | 47. B |       |
| 6. B | 13. C | 20. C | 27. C | 34. B | 41. B | 48. B |       |
| 7. D | 14. A | 21. B | 28. A | 35. C | 42. B | 49. D |       |

## \* (3) Complete the following:

- |                                |                            |                         |                                 |
|--------------------------------|----------------------------|-------------------------|---------------------------------|
| 1. Neutral – positive          | 9. 8 – 32                  | 18. 4 – s               | 27. D – phosphorus              |
| 2. Nucleus – energy levels     | 10. 4 – d                  | 19. Increase – increase | 28. Homogeneous – heterogeneous |
| 3. Positive – negative         | 11. Alkali metal – Halogen | 20. 11 - 17             | 29. Elements – compound         |
| 4. Neutral – nucleus           | 12. Monovalent – one       | 21. 4 – 1A              | 30. Carbon and hydrogen         |
| 5. Mass                        | 13. 2 – 5A                 | 22. F – d               | 31. Physical – chemical         |
| 6. P – Hg                      | 14. S – P                  | 23. Element – compound  | 32. Aerogel                     |
| 7. Copper – iron               | 15. One - monovalent       | 24. Ballons – car tires |                                 |
| 8. Mass number – atomic number | 16. 2 – 6A                 | 25. 99.8% - low         |                                 |
|                                | 17. Monovalent – divalent  | 26. Mercury – oxygen    |                                 |

## \* (4) Correct the underlined words:

- |               |                |                         |                        |
|---------------|----------------|-------------------------|------------------------|
| 1. Mg         | 8. Mass number | 15. Increase            | 21. Nitrogen           |
| 2. 27         | 9. Period      | 16. Magnetic attraction | 22. 5 – 3              |
| 3. 7          | 10. Less than  | 17. Element             | 23. Hoffmann voltmeter |
| 4. Equal      | 11. Halogen    | 18. Inorganic           | 24. Element            |
| 5. Methane    | 12. 118        | 19. HNO <sub>3</sub>    |                        |
| 6. Mercury    | 13. 7A         | 20. Helium              |                        |
| 7. Transition | 14. Two        |                         |                        |

## \* (5) Choose the odd word out:

- |              |                   |                     |
|--------------|-------------------|---------------------|
| 1. Quantum   | 5. <sup>6</sup> C | 9. Rusting          |
| 2. Thorium   | 6. O              | 10. Nitric acid     |
| 3. Bromine   | 7. Nitrogen       | 11. CH <sub>4</sub> |
| 4. Magnesium | 8. Hydrogen       |                     |

## \* (6) Put ( √ ) or ( X ) :

- |        |        |         |         |         |
|--------|--------|---------|---------|---------|
| 1. (X) | 5. (X) | 9. (√)  | 13. (X) | 17. (X) |
| 2. (X) | 6. (X) | 10. (√) | 14. (X) | 18. (√) |
| 3. (X) | 7. (X) | 11. (X) | 15. (X) | 19. (√) |
| 4. (X) | 8. (X) | 12. (√) | 16. (X) | 20. (X) |

**\* (7) Give reasons for each of the following :**

1. Because they have the same atomic number, but they differ in their mass numbers.
2. Because it contains positively charged protons and electrically neutral neutrons.
3. Because the mass of electrons is negligible compared to that of both the protons and neutrons found inside the nucleus.
4. Because the mass number equals the sum of the numbers of protons and neutrons in the nucleus of the atom, while the atomic number equals the number of protons only.
5. Because its outermost energy level contains one electron.
6. Because the Lewis structure for the atoms of their elements contains one unpaired electron.
7. Because the components of the solution cannot be distinguished by the naked eye.
8. Because the density of wood is less than that of water, while the density of coins is greater than that of water.
9. Because it is the lightest known solid material and it is characterized by highly durable and has an excellent insulating properties.
10. Because iron filing is attracted to magnet.
11. Because the components of the table salt solution cannot be distinguished by the naked eye, while the components of sand and water mixture can be distinguished by the naked eye.
12. Because carbon element is a main component in their composition.
13. Because the viscosity of water is less than that of honey.
14. Because the density of cork is less than that of water, while the density of iron is greater than that of water.
15. Because its density is lower than that of air and it is non-flammable.
16. Because it is not affected by the change in temperature and does not react with rubber.
17. Because it is lighter than aluminum alone and retains its strength at high temperatures.

**\* (8) What are the results of the following :**

1. The atom is electrically neutral
2. Plants, soil, human health, animals, and the environment in general will be harmed.
3. The atomic number is equal to the mass number.
4. A homogeneous mixture (solution) is formed.
5. A heterogeneous mixture (solution) is formed.
6. It decomposes into its two elements (mercury and oxygen).
7. It decomposes into its two elements (hydrogen gas and oxygen gas).
8. Cork will float while iron nail will sink
9. The color of the litmus paper turns red.

\*(9) Problems:

<p>1</p>	<p>1. 1U 2. 18e 3. 118 4. 7 5. 18 6. 4 7. 4</p>	<p>8</p>	<p>1. alkali metals – monovalent 2. s-block</p>																																																
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<p>3</p>	<p>The carbon atom is electrically neutral.</p>	<p>10</p>	<p>1. Element: Al – N<sub>2</sub> – Cu – O<sub>3</sub> 2. Compound: CO<sub>2</sub> – H<sub>2</sub>SO<sub>4</sub> – SiO<sub>2</sub> – NH<sub>3</sub></p>																																																
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تطبيق



مذكرات جاهزة للطباعة

لتحميل الملفات التعليمية مجاناً للمعلم والطالب

مذكرات وملازم / مراجعات وملخصات / امتحانات / كتب الوزارة /  
أدلة المعلم / دفاتر التحضير / سجلات مدرسية / أوراق تأسيس

امسح الكود بموبايلك علشان تقدر تثبت التطبيق

وتقدر ف أي وقت تحمّل ال نفسك فيه ببلاش

هيغنيك عن البحث والجروبات والقنوات الكثيرة



تطبيق الموبايل لتحميل الملفات