



مدونة المناهج السعودية

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الموقع التعليمي لجميع المراحل الدراسية

في المملكة العربية السعودية

Chemistry Test

Gram Atomic Mass (g/mol):

Oxygen (O) = 16.0

Sulfur (S) = 32.1

Beryllium (Be) = 9.01

Atomic Number:

Hydrogen (H) = 1

Nitrogen (N) = 7

Oxygen (O) = 8

Sodium (Na) = 11

Chlorine (Cl) = 17

Scandium (Sc) = 21

Cobalt (Co) = 27

Copper (Cu) = 29

Cadmium (Cd) = 48

Physical Constants:

Ion product constant for water (K_w) at 25 °C = 1.00×10^{-14}

1. The compound $(\text{Ca}_2\text{Mg}_5(\text{Si}_4\text{O}_{11})_2(\text{OH})_2)$ is composed of the following elements:

- (A) Cadmium, magnesium, sulfur, hydrogen and oxygen
- (B) Calcium, magnesium, silicon, hydrogen and oxygen
- (C) Copper, magnesium, silicon, hydrogen and oxygen
- (D) Cobalt, manganese, sulfur, hydrogen and oxygen

2. Which of the following elements exists as solid at room temperature?

Sulfur (S), Mercury (Hg), Argon (Ar), Platinum (Pt), Bromine (Br)

- (A) Sulfur (S) and Argon (Ar)
- (B) Mercury (Hg) and Platinum (Pt)
- (C) Mercury (Hg) and Bromine (Br)
- (D) Sulfur (S) and Platinum (Pt)

3. Which of the following processes leads to a **chemical change**?

- (A) Mixing sand with stones
- (B) Boiling water
- (C) Mixing aqueous solutions of silver nitrate and sodium chloride
- (D) Cutting glass

4. What is the **number of ions** formed when the compound $(\text{K}_2\text{H}(\text{PO}_4))$ is dissolved in water?

- (A) 4
- (B) 8
- (C) 3
- (D) 2

5. Which of the following compounds is an organic compound ?

- (A) Na_2CO_3
- (B) $\text{K}_2\text{Cr}_2\text{O}_7$
- (C) CH_3OH
- (D) CO

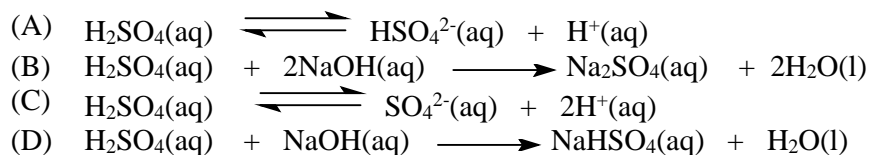
6. During electrolysis, the electric charge is carried through the solution by:

- (A) Ions
- (B) Protons
- (C) Neutral atoms
- (D) Neutrons

7. What is the correct chemical name of the compound $(\text{Fe}_2(\text{SO}_4)_3)$?

- (A) Iron(III) sulfite
- (B) Iron(III) thiosulfate
- (C) Iron(III) bisulfate
- (D) Iron(III) sulfate

8. Which of the following chemical equations represents complete neutralization reaction of sulfuric acid (H_2SO_4)?



9. $\text{CH}_3\text{COOH}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons \text{CH}_3\text{COO}^-(\text{aq}) + \text{H}_3\text{O}^+(\text{aq})$

In the above equilibrium system, which of the following is considered as conjugate base?

- (A) $\text{CH}_3\text{COOH}(\text{aq})$ (C) $\text{CH}_3\text{COO}^-(\text{aq})$
(B) $\text{H}_3\text{O}^+(\text{aq})$ (D) $\text{H}_2\text{O}(\text{l})$

10. Which of the following atoms in its ground state has **seven** electrons in its last d energy sublevel?

- (A) Scandium atom (Sc) (C) Copper atom (Cu)
(B) Cobalt atom (Co) (D) Cadmium atom (Cd)

11. Which of the following represents a pair of molecular compounds?

- (A) CO and KBr (C) I_2 and NiCl_2
(B) Na_2S and H_2S (D) CCl_4 and NO

12. When the coordinate covalent bond of the hydronium ion (H_3O^+) is formed, the oxygen atom (O) :

- (A) loses electrons (C) shares with two of its electrons
(B) shares with one of its electrons (D) shares with four of its electrons

13. Which of the following compounds contains **ionic** bond?

- (A) Na_2O (C) H_2O
(B) HCl (D) NO_2

14. In which of the following substances, the **oxidation number** of manganese (Mn) is +7?
- (A) MnO_2 (C) Mn
(B) KMnO_4 (D) Mn_2O_3
15. Which of the following values of $[\text{H}^+]$ or $[\text{OH}^-]$ represents a basic solution?
- (A) $[\text{OH}^-] = 1.0 \times 10^{-9}$ mol / liter (C) $[\text{H}^+] = [\text{OH}^-] = 1.0 \times 10^{-7}$ mol / liter
(B) $[\text{H}^+] = 1.0 \times 10^{-3}$ mol / liter (D) $[\text{H}^+] = 1.0 \times 10^{-10}$ mol / liter
16. The compound $(\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_3)$ contains :
- (A) Carboxylic acid group (C) Ether group
(B) Aldehyde group (D) Ester group
17. $m\text{PH}_3(\text{g}) + n\text{O}_2(\text{g}) \longrightarrow p\text{H}_2\text{O}(\text{g}) + q\text{P}_4\text{O}_{10}(\text{s})$
- After balancing the above chemical equation, the coefficient (**n**) before $\text{O}_2(\text{g})$ is:
- (A) 8 (C) 4
(B) 6 (D) 5
18. The simplest chemical test that can be used to distinguish between aqueous solution of barium nitrate ($\text{Ba}(\text{NO}_3)_2$) and aqueous solution of sodium chloride (NaCl) is by using aqueous solution of _____
- (A) lithium nitrate (LiNO_3) (C) barium chloride (BaCl_2)
(B) sulfuric acid (H_2SO_4) (D) nitric acid (HNO_3)
19. $\text{P}_4(\text{g}) + 5\text{O}_2(\text{g}) \rightleftharpoons \text{P}_4\text{O}_{10}(\text{s})$
- What is the equilibrium constant expression for the above equilibrium system?
- (A) $K = P_{\text{P}_4} \cdot P_{\text{O}_2}^5$
(B) $K = P_{\text{P}_4} / P_{\text{O}_2}^5$
(C) $K = P_{\text{P}_4\text{O}_{10}} / P_{\text{P}_4} / P_{\text{O}_2}^5$
(D) $K = 1 / P_{\text{P}_4} \cdot P_{\text{O}_2}^5$
20. What is the molar solubility of a saturated solution of calcium sulfite (CaSO_3) if the value of the solubility product constant (K_{sp}) is equal to 3.00×10^{-7} ?
- (A) 5.48×10^{-4} mol / liter (C) 4.58×10^{-7} mol / liter
(B) 3.00×10^{-7} mol / liter (D) 3.16×10^{-3} mol / liter

21. What is the volume that is occupied by 175.0 g of lead, if the density of lead is equal to 11.35 g/cm^3 ?
- (A) 19.86 cm^3 (C) 30.80 cm^3
(B) 175.0 cm^3 (D) 15.42 cm^3
22. In which of the following compounds is the percent by mass of sulfur (S) less than 20.0 %?
- (A) $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$ (248.2 g / mol) (C) K_2SO_4 (174.3 g / mol)
(B) $\text{Ce}(\text{HSO}_4)_4$ (528.4 g / mol) (D) $(\text{NH}_4)_2\text{S}_2\text{O}_8$ (228.20 g / mol)
23. What is the volume of a solution prepared by dissolving 0.375 g of cobalt nitrate ($\text{Co}(\text{NO}_3)_2$) in water to prepare a solution with a concentration of 0.050 mole / liter? [molar mass of cobalt nitrate ($\text{Co}(\text{NO}_3)_2$)= 182.9 g / mol]
- (A) 41.0 cm^3 (C) 24.4 cm^3
(B) 50.0 cm^3 (D) 75.0 cm^3
24. How many grams of oxygen (O) are there in 125.5 g of white lead (basic lead carbonate, $\text{Pb}_3(\text{CO}_3)_2 \cdot (\text{OH})_2$)? [molar mass of white lead = 775.6 g / mol?]
- (A) 7.930 g (C) 15.87 g
(B) 20.71 g (D) 10.57 g
25. What is the number of moles of beryllium (Be) in 24.75 g of the compound ($\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$)? [molar mass of the compound ($\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$) = 537.6 g / mol]
- (A) 0.04604 mol (C) 0.1381 mol
(B) 0.09208 mol (D) 0.2762 mol

**Answers - English Exam****إجابات اختبار اللغة الانجليزية**

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C D	19 -	A B C D	37 -	A B C D	55 -	A B C D	73 -	A B C D
2 -	A B C D	20 -	A B C D	38 -	A B C D	56 -	A B C D	74 -	A B C D
3 -	A B C D	21 -	A B C D	39 -	A B C D	57 -	A B C D	75 -	A B C D
4 -	A B C D	22 -	A B C D	40 -	A B C D	58 -	A B C D	76 -	A B C D
5 -	A B C D	23 -	A B C D	41 -	A B C D	59 -	A B C D	77 -	A B C D
6 -	A B C D	24 -	A B C D	42 -	A B C D	60 -	A B C D	78 -	A B C D
7 -	A B C D	25 -	A B C D	43 -	A B C D	61 -	A B C D	79 -	A B C D
8 -	A B C D	26 -	A B C D	44 -	A B C D	62 -	A B C D	80 -	A B C D
9 -	A B C D	27 -	A B C D	45 -	A B C D	63 -	A B C D	81 -	A B C D
10 -	A B C D	28 -	A B C D	46 -	A B C D	64 -	A B C D	82 -	A B C D
11 -	A B C D	29 -	A B C D	47 -	A B C D	65 -	A B C D	83 -	A B C D
12 -	A B C D	30 -	A B C D	48 -	A B C D	66 -	A B C D	84 -	A B C D
13 -	A B C D	31 -	A B C D	49 -	A B C D	67 -	A B C D	85 -	A B C D
14 -	A B C D	32 -	A B C D	50 -	A B C D	68 -	A B C D		
15 -	A B C D	33 -	A B C D	51 -	A B C D	69 -	A B C D		
16 -	A B C D	34 -	A B C D	52 -	A B C D	70 -	A B C D		
17 -	A B C D	35 -	A B C D	53 -	A B C D	71 -	A B C D		
18 -	A B C D	36 -	A B C D	54 -	A B C D	72 -	A B C D		

Answers - Mathematics Exam**إجابات اختبار الرياضيات**

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C D	6 -	A B C D	11 -	A B C D	16 -	A B C D
2 -	A B C D	7 -	A B C D	12 -	A B C D	17 -	A B C D
3 -	A B C D	8 -	A B C D	13 -	A B C D	18 -	A B C D
4 -	A B C D	9 -	A B C D	14 -	A B C D	19 -	A B C D
5 -	A B C D	10 -	A B C D	15 -	A B C D	20 -	A B C D

Answers - Chemistry Exam**إجابات اختبار الكيمياء**

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C D	6 -	A B C D	11 -	A B C D	16 -	A B C D	21 -	A B C D
2 -	A B C D	7 -	A B C D	12 -	A B C D	17 -	A B C D	22 -	A B C D
3 -	A B C D	8 -	A B C D	13 -	A B C D	18 -	A B C D	23 -	A B C D
4 -	A B C D	9 -	A B C D	14 -	A B C D	19 -	A B C D	24 -	A B C D
5 -	A B C D	10 -	A B C D	15 -	A B C D	20 -	A B C D	25 -	A B C D

Answers - Arabic Exam**إجابات اختبار اللغة العربية**

Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers	Q's#	Answers
1 -	A B C D	11 -	A B C D	21 -	A B C D	31 -	A B C D	41 -	A B C D	51 -	A B C D
2 -	A B C D	12 -	A B C D	22 -	A B C D	32 -	A B C D	42 -	A B C D	52 -	A B C D
3 -	A B C D	13 -	A B C D	23 -	A B C D	33 -	A B C D	43 -	A B C D	53 -	A B C D
4 -	A B C D	14 -	A B C D	24 -	A B C D	34 -	A B C D	44 -	A B C D	54 -	A B C D
5 -	A B C D	15 -	A B C D	25 -	A B C D	35 -	A B C D	45 -	A B C D	55 -	A B C D
6 -	A B C D	16 -	A B C D	26 -	A B C D	36 -	A B C D	46 -	A B C D	56 -	A B C D
7 -	A B C D	17 -	A B C D	27 -	A B C D	37 -	A B C D	47 -	A B C D	57 -	A B C D
8 -	A B C D	18 -	A B C D	28 -	A B C D	38 -	A B C D	48 -	A B C D	58 -	A B C D
9 -	A B C D	19 -	A B C D	29 -	A B C D	39 -	A B C D	49 -	A B C D	59 -	A B C D
10 -	A B C D	20 -	A B C D	30 -	A B C D	40 -	A B C D	50 -	A B C D	60 -	A B C D