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Question **1**

Not yet answered

v2 (latest)

The relative molecular mass of sulfuric acid (H_2SO_4) is:

- ☐ a. 120;
- ☐ b. 98;
- ☐ c. 49;
- ☐ d. 240

Question **2**

Not yet answered

v2 (latest)

How many moles are there in 11 g of CO_2 ?

- ☐ a. 0.35
- ☐ b. 0.25;
- ☐ c. 0.15;
- ☐ d. 0.05;

Question **3**

Not yet answered

v2 (latest)

How many grams are there in 0.5 moles of Al_2O_3 ?

- ☐ a. 204 grams;
- ☐ b. 51 grams;
- ☐ c. 102 grams;
- ☐ d. 408 grams

Question **4**

Not yet answered

v3 (latest)

How many molecules are there in 3 moles of any substance?

- ☐ a. $18.06 \cdot 10^{23}$;
- ☐ b. $6.02 \cdot 10^{23}$;
- ☐ c. $24.08 \cdot 10^{23}$
- ☐ d. $12.04 \cdot 10^{23}$;

Question **5**

Not yet answered

v1 (latest)

What is the mass number of an atom?

- ☐ a. The total number of electrons and neutrons;
- ☐ b. The total number of protons, electrons, and neutrons
- ☐ c. The total number of protons and electrons
- ☐ d. The total number of protons and neutrons;

Question **6**

Not yet answered

v1 (latest)

Which quantum number corresponds to the energy level number?

- ☐ a. l - azimuthal quantum number
- ☐ b. S - spin quantum number
- ☐ c. n - principal quantum number;
- ☐ d. m - magnetic quantum number;

Question **7**

Not yet answered

v1 (latest)

Which quantum number determines the orientation of an orbital in space?

- ☐ a. Azimuthal quantum number (l);
- ☐ b. Principal quantum number (n);
- ☐ c. Magnetic quantum number (m);
- ☐ d. Spin quantum number (S)

Question **8**

Not yet answered

v3 (latest)

The electronic formula of the neon (Ne) atom is:

- ☐ a. $1s^2 2s^2 2p^6$;
- ☐ b. $1s^2 1p^6 1d^7$
- ☐ c. $1s^2 1p^6 2s^2 2p^5$;
- ☐ d. $1s^2 2s^2 2p^6 3s^2 3p^1 4s^2$;

Question **9**

Not yet answered

v2 (latest)

Which atom of the element corresponds to the electronic formula: $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2$:

- ☐ a. Zn;
- ☐ b. Al
- ☐ c. Mn;
- ☐ d. Ca;

Question **10**

Not yet answered

v2 (latest)

An element with an nuclear charge of +88 is located in:

- ☐ a. II -A group of period VII;
- ☐ b. V-A group of period V
- ☐ c. VII-A group of period IV;
- ☐ d. V-B group of period VI;

Question **11**

Not yet answered

v1 (latest)

The metallic properties of the elements increase in the following order:

- ☐ a. Li K Cs Fr;
- ☐ b. Ba Sr Ca Mg;
- ☐ c. Tl In Ga Al;
- ☐ d. Pb Sn Ge Si

Question **12**

Not yet answered

v1 (latest)

Which of the following rows of elements is arranged in order of increasing atomic radius:

- ☐ a. N P As Sb;
- ☐ b. In Ga Al B;
- ☐ c. K Ca Mg Be;
- ☐ d. Te Se S O

Question **13**

Not yet answered

v1 (latest)

The chemical formula of an oxide of type E_2O_5 formed by an element of the third period is:

- ☐ a. P_2O_3 ;
- ☐ b. N_2O_5 ;
- ☐ c. P_2O_5
- ☐ d. As_2O_5 ;

Question **14**

Not yet answered

v1 (latest)

A bond formed by electrostatic attraction between ions is:

- ☐ a. Covalent bond;
- ☐ b. Ionic bond;
- ☐ c. Hydrogen bond
- ☐ d. Metallic bond;

Question **15**

Not yet answered

v1 (latest)

Ionic compounds are not characterized by:

- ☐ a. High boiling point;
- ☐ b. Solubility in water
- ☐ c. Volatility;
- ☐ d. High melting point;

Question **16**

Not yet answered

v1 (latest)

A covalent bond formed by the unshared pair of one atom and the free orbital of another atom is:

- ☐ a. Formed by a donor-acceptor mechanism;
- ☐ b. Nonpolar covalent;
- ☐ c. Formed by electrostatic attraction of ions
- ☐ d. Formed by an exchange mechanism;

Question **17**

Not yet answered

v1 (latest)

During the formation of a donor-acceptor bond, the atom with an unshared pair of electrons is:

- ☐ a. Polar;
- ☐ b. Non-polar
- ☐ c. The donor;
- ☐ d. The acceptor;

Question **18**

Not yet answered

v3 (latest)

What type of hybridization do the valence orbitals of the carbon atom undergo during the formation of C_2H_6 ?

- ☐ a. Does not undergo hybridization
- ☐ b. sp^2 ;
- ☐ c. sp^3 ;
- ☐ d. sp ;

Question **19**

Not yet answered

v1 (latest)

In the formation of metallic bonds, the following participate:

- ☐ a. Only the electrons of the second-to-last energy level
- ☐ b. Only the electrons of the outer energy level;
- ☐ c. All electrons in the atom;
- ☐ d. Only the electrons of the penultimate energy level;

Question **20**

Not yet answered

v1 (latest)

Which element's participation determines the name "hydrogen bond"?

- ☐ a. Nitrogen's (N);
- ☐ b. Carbon's (C);
- ☐ c. Oxygen's (O);
- ☐ d. Hydrogen's (H)

Question **21**

Not yet answered

v3 (latest)

Only acidic oxides are listed in the row:

- ☐ a. N_2O_3 , SO_3 , CO_2 , N_2O_5 ;
- ☐ b. K_2O , P_2O_3 , Na_2O , NO
- ☐ c. SO_2 , SO_3 , Na_2O , N_2O_5 ;
- ☐ d. CaO_2 , SO_3 , CuO , N_2O_5 ;

Question **22**

Not yet answered

v1 (latest)

The name of the oxide SO_3 is:

- ☐ a. Sulfur (V) oxide
- ☐ b. Sulfur (IV) oxide;
- ☐ c. Sulfur (II) oxide;
- ☐ d. Sulfur (VI) oxide;

Question **23**

Not yet answered

v3 (latest)

Which row contains only alkalis?

- ☐ a. NaOH , $\text{Cu}(\text{OH})_2$, $\text{Al}(\text{OH})_3$;
- ☐ b. KOH , $\text{Ca}(\text{OH})_2$, $\text{Fe}(\text{OH})_2$;
- ☐ c. NaOH , $\text{Ca}(\text{OH})_2$, NH_4OH ;
- ☐ d. NH_4OH , $\text{Cu}(\text{OH})_2$, $\text{Ba}(\text{OH})_2$

Question **24**

Not yet answered

v1 (latest)

An acid that contains three hydrogen atoms capable of being replaced by a metal is:

- ☐ a. Monobasic;
- ☐ b. Tribasic;
- ☐ c. Dibasic;
- ☐ d. Tetrabasic

Question **25**

Not yet answered

v3 (latest)

An oxygen-containing acid that is not obtained by dissolving the corresponding oxide in water is:

- ☐ a. HNO_3 ;
- ☐ b. H_2SO_4 ;
- ☐ c. H_2CO_3 ;
- ☐ d. H_2SiO_3

Question **26**

Not yet answered

v1 (latest)

Salts of nitric acid are called:

- ☐ a. Carbonates
- ☐ b. Nitrates;
- ☐ c. Chlorides;
- ☐ d. Nitrites;

Question **27**

Not yet answered

v1 (latest)

The name of the complete salt obtained by the reaction between calcium hydroxide and nitric acid is:

- ☐ a. Calcium chloride;
- ☐ b. Calcium carbonate
- ☐ c. Calcium nitrate;
- ☐ d. Calcium nitrite;

Question **28**

Not yet answered

v2 (latest)

In the complex compound: $K_3[Fe(CN)_6]$ the charge of the central atom is:

- ☐ a. -3
- ☐ b. +3;
- ☐ c. +2;
- ☐ d. +1;

Question **29**

Not yet answered

v2 (latest)

The complex compound $K_2[PtCl_4]$ is:

- ☐ a. anionic;
- ☐ b. cationic;
- ☐ c. neutral

Question **30**

Not yet answered

v2 (latest)

The coordination number of the central atom in the complex compound $[\text{Co}(\text{NH}_3)_3\text{Cl}_3]$ is:

- ☐ a. 3;
- ☐ b. +3;
- ☐ c. +6
- ☐ d. 6;

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