

CHEMISTRY QUESTIONS OF CATEGORY 1

1. X has atomic number 11. Y has atomic number 17. State The formula of the compound formed between them

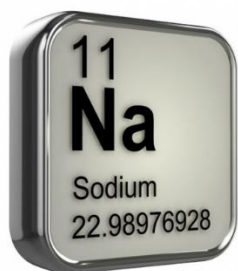
- A.YX
- B.X2Y
- C.XY
- D.Y2X

2. Give the formula of the magnesium fluoride.



- A.Mg2F
- B.MgF
- C.MgF2
- D.2MgF

3. Na has an atomic number of 11 and a mass number of 23. State the number of protons, neutrons and electrons.



- A.P = 11, E = 11, N = 12
- B.P = 11, E = 11, N = 34
- C.P = 11, E = 12, N = 11
- D.P = 11, E = 11, N = 11

4. Periodic law states that the elements are arranged according to their atomic _____ so that elements with similar chemical properties are in the same _____ and properties repeat periodically.

- A. numbers, rows
- B. masses, rows
- C. masses, column
- D. numbers, column

5. is the only metal that is a liquid at room temperature.

- A. Platinum
- B. Water
- C. Tin
- D. Mercury

6. What is the term of an atom that will lose electron(s) and have a positive change?

- A. cation
- B. anion
- C. electronegativity
- D. ionic radius

7. Metals are sonorous in nature. What is sonorous?



- A. Making into powder
- B. Drawn into wires
- C. Make sound on beating
- D. None of these

8. Able to be drawn into wire is

- A. Malleable
- B. Insulator
- C. lustre
- D. Ductile

9. The approximate number of elements we know about today is

- A.138 B.128 C.118 D.108

10. Which of the following statement is correct?



Reaction.

- A.Smaller size of reactants, smaller total surface area, higher reaction rate
 B.Larger size of reactants, smaller total surface area, higher reaction rate
 C.Smaller size of reactants, larger total surface area, higher reaction rate
 D.Larger size of reactants, larger total surface area, higher reaction rate

11. Which factors increase the rate of a reaction.



reactions

- A.Increasing temperature
 B.Increasing concentration
 C.Increasing surface area
 D.All of these

12. Which one of the following can be used as an acid-base indicator by a visually impaired student?

- A.Litmus B.Turmeric
 C.Methyl Orange D.Vanilla essence

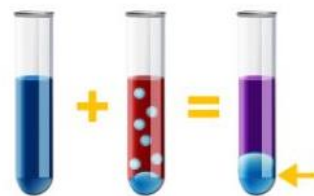
13. Identify the products of the following reaction: $\text{CaCO}_3 + 2\text{HCl} \rightarrow$

- A.Calcium hydrogen carbonate and chlorine gas
 B.Calcium chloride and water
 C.Calcium oxide, carbon dioxide and water
 D.Calcium chloride, carbon dioxide and water

14. Stars like the sun have the ability to fuse atoms together to create new atoms. When this happens, the subatomic particles are added together to create a new atom. If the sun fuses a carbon atom (6 protons) with a helium atom (2 protons), an atom of what element is formed?

- A.Beryllium (Be)
 B.Magnesium (Mg)
 C.Oxygen (O)
 D.Carbon(C)

15. Which is the name of the kind of solid substance formed in this figure?



- A.Aqueous
 B.Precipitate
 C.Acids
 D.Synthesis

16. What is the word equation for a neutralisation reaction?



- A) acid + base \rightarrow salt + hydrogen + water
 B) acid + base \rightarrow water
 C) acid + base \rightarrow salt + water
 D) acid + base \rightarrow salt + carbon dioxide + water

17. Which of these is a disadvantage of hydrogen fuel cells

- A.Produces pollution

- B.Expensive and flammable
- C.Heavy and weak
- D.Large and unattractive

18. The greatest percentage of energy used in the United States is utilized for

- A.transportation
- B.heating homes and operating appliances
- C.manufacturing products and producing food
- D.providing electricity to businesses and office buildings



How many moles of H_2 is needed to react with 2 moles of N_2 ?

- A.6
- B.3
- C.2
- D.1

20. How many molecules are there in 31.8 moles of water? (H_2O has a molar mass of 18.0 g/mol)

- A. 15.91×10^{25} molecules
- B. 1.91×10^{25} molecules
- C. 5.28×10^{-25} molecules
- D. 17.1×10^{25} molecules

21. If the atomic number of X is 56, and the mass of an atom of X is 148, how many neutrons does this atom have?

Answer:

22. John Wick measures out 6.0 moles of epsom salt ($MgSO_4$) to put in her bath. How many grams of $MgSO_4$ went in the bath in

Answer:

23. What is the molarity of a 0.5L sample of a solution that contains 60.0 g of sodium hydroxide ($NaOH$) in M?

Answer:

24. What is the molarity of 2 moles of HCl in 25 mL of solution in M?

Answer:

25. The first part of a balanced chemical equation is shown: $H_2SO_4 + 3NaOH \rightarrow$ _____. In order for this equation to be balanced, how many hydrogen (H) atoms must be present in the products?

Answer: