

## 24 Multiple choice questions

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- the combining power of an element
  - valency
  - atom
  - alloy
  - mole
- a statement that matter can neither be created nor destroyed; it can only be changed from one form to another
  - law of combining volumes
  - ionisation energy
  - activity series of metals
  - law of conservation of matter
- the mass in grams of one mole of a substance with units of grams per mole; calculated by adding the atomic weights of all atoms in the substance
  - mole
  - molar mass
  - mineral
  - ore
- the negative electrode in an electrolysis cell
  - cathode
  - anode
  - mole
  - atom
- the quantity of product predicted from the balanced chemical equation when known quantities of reactants undergo reaction
  - electrolysis
  - empirical formula
  - periodic table
  - theoretical yield
- the passing of a direct electric current through a solution or molten material to decompose it
  - electronegativity
  - molar mass
  - isotopes
  - electrolysis

7. the average mass of the atoms present in a naturally occurring element relative to the mass of an atom of carbon-12 taken as exactly 12 as the standard
  - a. mineral
  - b. atomic weight
  - c. anode
  - d. atom
  
8. the percentage by mass of each element of a compound
  - a. electronegativity
  - b. percentage composition
  - c. electrolysis
  - d. isotopes
  
9. the energy required to remove an electron from an atom in the gas state
  - a. ionisation energy
  - b. isotopes
  - c. mineral
  - d. valency
  
10. a tool which shows the relative reactivity of common metals from most reactive to least reactive, based on the chemical reactions they undergo
  - a. activity series of metals
  - b. atomic weight
  - c. periodic table
  - d. law of conservation of matter
  
11. the formula for a compound representing its atomic or ionic composition expressed in simple whole numbers e.g. the empirical formula for benzene, C<sub>6</sub>H<sub>6</sub> IS CH
  - a. mineral
  - b. theoretical yield
  - c. molar mass
  - d. empirical formula
  
12. the positive electrode in an electrolysis cell
  - a. ore
  - b. anode
  - c. mole
  - d. cathode

13. a statement that equal volumes of all gases at the same temperature and pressure contain equal numbers of particles
- molar mass
  - Avogadro's number
  - Avogadro's law
  - isotopes
14. atoms with the same number of protons, but different numbers of neutrons and so different mass
- anode
  - atom
  - isotopes
  - mole
15. a table of the chemical elements in order of atomic number, arranged in rows and columns to illustrate periodic similarities and trends in physical and chemical properties
- atomic weight
  - periodic table
  - anode
  - mole
16. an equation written to describe an oxidation or reduction half-reaction, showing the loss or gain of electrons by an atom, forming an ion
- half-equations
  - cathode
  - valency
  - molar mass
17. a natural material obtained from the crust of the Earth that contains metals or other material
- mole
  - ore
  - anode
  - atom
18. a measure of the ability of an element to attract electrons
- atomic weight
  - electronegativity
  - electrolysis
  - periodic table

19. a statement that the volumes of reacting gases involved (at the same temperature and pressure) may be expressed in simple whole number ratios
- law of combining volumes
  - law of conservation of matter
  - half-equations
  - Avogadro's number
20. the number of particles in one mole of any substance; equal to  $6.022 \times 10^{23}$
- Avogadro's law
  - Avogadro's number
  - molar mass
  - anode
21. a naturally occurring solid with a fixed chemical composition from which a metal or other material can be obtained
- mole
  - mineral
  - valency
  - ore
22. a homogeneous mixture of a metal with one or more metals (or carbon) to give different properties e.g. steel and brass
- alloy
  - atom
  - anode
  - mole
23. the smallest particle of matter that can take part in a chemical reaction; consists of a nucleus surrounded by electrons
- cathode
  - atom
  - anode
  - alloy
24. the amount of substance that contains the same number of particles as there are in exactly 12.00 grams of carbon-12
- atom
  - ore
  - anode
  - mole