1 **Which of the following is not an example of a chemical element?**

A. Nitrogen

B. Sodium

C. Carbon

D. Carbon monoxide

E. hydrogen

2 **…… have a constant mass, fixed volume, and a variable shape.**

A. Solids

B. Liquids

C. Gases

D. Elements

E. Compounds

3 **Air is an example of:**

A. Pure compound

B. Homogeneous mixture

C. Heterogeneous mixture

D. None of the above

4 **Odor and taste are examples of**

A. Chemical change

B. Chemical Properties

C. Physical properties

D. None

5 **Direct conversion of solid to gas state without passing through liquid state is known as**

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A. Melting

B. Condensing

C. Vaporization

D. Sublimation

E. Deposition

6 Crystalline solid state is defined as

A. Atoms and molecules are arranged in patterns of long range repeating order.

B. Atoms and molecules are not arranged in ordered way.

C. Small molecules are arranged around large ones

D. None

7 Sandy water is an examples of

A. Homogenous mixture

B. Heterogeneous mixture

C. Pure compounds

D. Pure element.

E. None

8 The change that alters the composition of substance is:

A. Physical change

B. Physical property

C. Chemical change

D. None

9 The energy stored in the body by its position is known as:

A. Potential energy

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B. Kinetic energy

C. Work

D. None

10 SI unit of volume is:

A. Liter

B. Cubic meter

C. Kelvin

D. Celsius

11 177°C is equal to :

A. 0 K

B. 100 K

C. 120 °F

D. 350 °F

12 The unit of density of the gases is

A. g/mL

B. g/L

C. g/cm^3

D. None

13 The prefix micro means the measurement is multiplied by

A. 10^{-1}

B. 10^{-3}

C. 10^{-6}

D. None

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14 **A 0.25 g solid sample has a volume of 0.15 cm^3, its density is:**

A. 1.67

B. 0.15

C. 0.6

D. None

15 **If 35 g metal sample is added to water in a graduated cylinder and the water rises from 25.0 ml to 32.0 ml, its density is**

A. 0.2 ml/g

B. 1.09 g/ml

C. 5 g/ml

D. None

16 **Law of conservation of matter is defined by:**

A. Dalton

B. Lavoisier

C. Rutherford

D. Thomson

17 **……. has developed the plum pudding model of an atom**

E. Dalton

F. Lavoisier

G. Rutherford

H. Thomson

18 **….. is the number of protons inside the nucleus that determines the element:**

A. Mass number

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B. Avogadro's number

C. Atomic number

D. None

19 Isotopes are elemental atoms that have same atomic number with different mass numbers due to the change in the number of

A. protons

B. neutrons

C. electrons

D. None

20 The periodic table is firstly developed by:

A. Dalton

B. Lavoisier

C. Rutherford

D. Mendeleev

21 Mendeleev arranged the element of similar properties in vertical columns in order of increasing …… .

A. No. of electrons

B. Atomic mass

C. Atomic number

D. Size

22 All metals are solids except …..

A. Mercury

B. Iron

C. oxygen

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D. sodium

23 …… have intermediate conductivity so, they are known as semiconductors

A. Metals

B. Nonmetals

C. Metalloids

D. None

24 Alkaline earth metals form ……. charged ions

A. + 1

B. + 2

C. + 3

D. – 2

25 Halogens are in group 7A, so they form ---- charged ions.

A. – 1
B. + 1
C. + 2
D. – 2

26 Oxygen lies in group 6A, so it forms ---- charged anion

A. - 1

B. - 2

C. - 3

D. None

27 Avogadro stated that 1 mole of any substance contains ……. particles

A. 6.022×10^{23}

B. 6.022 g

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C. 1

D. None

28 A 0.4 g Mg metal contains …… atoms (Atomic Mass of Mg = 24 g/mol)

A. 6.022×10^{23}

B. 10^{22}

C. 9.6

D. None

29 A 4.93 g of Carbon dioxide (CO_2) contain …. moles (C = 12, O = 16).

A. 0.112

B. 1.12

C. 11.2

D. None

30 Principal quantum number (n) indicates …… .

A. Shape of orbital

B. Type of orbital

C. Energy level

D. None

31 The value of angular quantum number (l) equals to 2 for the orbital

A. s

B. p

C. d

D. f

32 ……. stated that no two electrons can have the same four quantum numbers

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A. Pauli exclusion principle

B. Law of conservation of matter

C. Millikan oil experiment

D. Rutherford experiment

33 ….. orbital has maximum capacity of six electrons

A. s

B. p

C. d

D. f

34 The filling of orbitals with electrons must be in order of energy increase, this principle is proposed by …….

A. Dalton

B. Millikan

C. Lavoisier

D. Aufbau

35 ….. stated that the electrons are placed in orbitals of same energy singly before pairing.

A. Hund's rule

B. Aufbau principle

C. Pauli exclusion principle

D. Lavoisier

36 The valence electron are the electrons that are present in the outer most energy level and can be predicted form the …….. .

A. No. of period

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B. No. of group

C. Size of atom

D. Atomic mass

37 The element loses or gains electrons to reach the electronic configuration of the nearest

A. Alkali metals

B. Alkaline earth metals

C. Halogens

D. Noble gases

38 ……. is the pulling force that the electron feels from the protons inside the nucleus.

A. Effective nuclear charge

B. The atomic number

C. Core electrons

D. Valence electrons

39 Ionization energy is

A. Exothermic

B. Endothermic

C. Constant

D. None

40 …… have the maximum ionization energy among the elements in the periodic table.

A. Alkali metals

B. Alkaline earth metals

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C. Halogens

D. Noble gases

41 …… have the greatest electron affinity among the elements of the periodic table.

A. Alkali metals

B. Alkaline earth metals

C. Halogens

D. Noble gases

42 …… have electron affinity ~ Zero

A. Alkali metals

B. Alkaline earth metals

C. Halogens

D. Noble gases

****

With my best wishes

Khaled Khalil