

Scientific Terminology

First Year

Second Semester

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Question 1: Choose the correct answer

1- This is a temperature reading made relative to absolute zero. We use the unit of Kelvins for these readings.

A. Absolute temperature

B. Absolute zero

C. Accuracy

D. Acid

2- This is the lowest temperature possible. If you remember that temperature is a measurement of how much atoms move around in a solid, you can guess that they stop moving entirely at absolute zero. In reality, bonds still vibrate a little bit, but for the most part you don't see much happening

A. Absolute temperature

B. Absolute zero

C. Accuracy

D. Acid

3- When you measure something, the accuracy is how close your measured value is to the real value. For example, if you're actually six feet tall and your brother measures your height as six feet, one inch, he's pretty accurate. However, if your cousin measures your height as twelve feet, 13 inches, he's not accurate at all.

A. Absolute temperature

B. Absolute zero

C. Accuracy

D. Acid

4- : A substance that dissociates in water to produce hydrogen ions (H^+) as the only positive ions. Acids have a pH less than 7 and are good at dissolving metals. They turn litmus paper red and phenolphthalein colorless

A. Absolute temperature

B. Absolute zero

C. Accuracy

D. Acid

5- An organic compound containing the hydroxyl group (-OH)

A. Alcohol

B. Acid

C. Alkali

D. Base

6- A substance that dissociates in water to produce hydroxide ions (OH-)

Bases that are soluble in water are known as

A. Alcohol

B. Acid

C. Alkali

D. Base

7- The elements in Group I of the Periodic Table

A. Alkane

B. Alkali Metals

C. Alkene Hydrocarbons

D. Alkyne

8- Hydrocarbons having the general formula C_nH_{2n+2}

A. Alkane

B. Alkali Metals

C. Alkene Hydrocarbons

D. Alkyne

9- that contains one or more carbon-carbon double bonds

A. Alkane

B. Alkali Metals

C. Alkene Hydrocarbons

D. Alkyne

10- An organic molecule containing at least one C-C triple bond. have the general formula C_nH_{2n-2}

A. Alkane

B. Alkali Metals

C. Alkene Hydrocarbons

D. Alkyne

11- : The smallest particles of an element that have the chemical properties of the element

A. Atom

B Atomic Number

C. Anion

D. Alkyne

12- The condition in which air contains a high concentration of certain chemicals that may harm living things or damage non-living things

A. Atom

B Actual Yield

C. Air Pollution

D. Activation Energy

13- The amount of pure products that is actually produced in the experiment

A. Atom

B Actual Yield

C. Air Pollution

D. Activation Energy

14- A reaction in which a molecule (element or compound) adds to an unsaturated compound to form a single saturated compound

A. Addition Reaction

B Actual Yield

C. Air Pollution

D. Activation Energy

15- The minimum energy that reactant particles must possess during their collisions in order for a chemical reaction to occur

A. Addition Reaction

B Actual Yield

C. Air Pollution

D. Activation Energy

16- A substance that reacts with an acid to form a salt and water only Metal oxides and hydroxides are bases A soluble base is called an alkali

A. Base

B Basicity

C. Biodegradable

D. Boiling Point

17- The number of hydrogen atoms in one molecule of acid that form hydrogen ions

A. Base

B Basicity

C. Biodegradable

D. Boiling Point

18- Ability to be broken down into simpler substances by micro-organisms

A. Base

B Basicity

C. Biodegradable

D. Boiling Point

19- The temperature at which a liquid turns rapidly to its vapour and it occurs throughout the whole liquid

A. Base

B Basicity

C. Biodegradable

D. Boiling Point

20- The amount of energy that holds the neutrons and protons together in the nucleus of an atom. It's a lot of energy, which is why you don't see nuclei falling apart all over the place.

A. Binding energy

B Basicity

C. Biodegradable

D. Boiling Point

21- This is when a bunch of voltaic cells are stuck together. • beta particle: A radioactive particle equivalent to an electron.

A. Binding energy

B Battery

C. Biodegradable

D. Boiling Point

22- A liquid that resists change in pH by the addition of acid or base. It consists of a weak acid and its conjugate base (acetic acid and sodium acetate, for example).

A. Binding energy

B Basicity

C. Buffer

D. Boiling Point

23- An organic acid containing the carboxyl group (-COOH)

A. Carboxylic Acid

B Catalyst

C. Cation

D. Chemical Bond

24- is a substance which increases the speed of a chemical reaction and remains chemically unchanged at the end of the reaction

A. Carboxylic Acid

B Catalyst

C. Cation

D. Chemical Bond

25- A positively charged ion which moves towards the cathode during electrolysis

A. Carboxylic Acid

B Catalyst

C. Cation

D. Chemical Bond

26- A force that holds particles (atoms or ions) together in chemical reaction

A. Carboxylic Acid

B Catalyst

C. Cation

D. Chemical Bond

27- A property of a substance in which there is a chemical reaction, e.g. combustion

A. Chemical Property

B Chromatography

C. Combustion

D. Concentration

28- A method of separating two or more components that dissolve in the same solvent Also used to determine the purity of a sample since they only give one spot on a chromatogram

A. Chemical Property

B Chromatography

C. Combustion

D. Concentration

29- The chemical name for process of burning It occurs when a substance reacts rapidly with oxygen

A. Chemical Property

B Chromatography

C. Combustion

D. Concentration

**30- The amount of a solute that is dissolved in a unit volume of the solution
Expressed in g/dm³ or mol/dm³ (Molar Concentration)**

A. Chemical Property

B Chromatography

C. Combustion

D. Concentration

31- The wearing away of the surface of a metal by chemical action

A. Chemical Property

B Corrosion

C. Crystallisation

D. Cracking

**32- A physical method used to purify crystals and substances that decompose
on strong heating**

A. Chemical Property

B Corrosion

C. Crystallisation

D. Cracking

**33- The breaking down of long chain hydrocarbon molecules with heat and/or
catalyst to produce smaller hydrocarbon molecules and/or hydrogen gas**

A. Chemical Property

B Corrosion

C. Crystallisation

D. Cracking

**34- A chemical reaction that results in the breaking down of a compound into
two or more components**

A. Decomposition

B Diffusion

C. Distillation

D. Ductile

35- The process by which particles move freely to fill up any available space From region of higher concentration to region of lower concentration Gas particles of different sizes diffuse at different rates

A. Decomposition

B Diffusion

C. Distillation

D. Ductile

36- A process of obtaining the pure solvent from a solution When the solution is boiled, the solvent is vaporised and the vapour condenses to reform the pure liquid

A. Decomposition

B Diffusion

C. Distillation

D. Ductile

37- A reaction in which an atom or molecule takes the place of another atom or molecule in a compound e.g. Halogen Displacement Reactions e.g. Metal Displacement Reactions

A. Decomposition

B Diffusion

C. Displacement reaction

D. Ductile

38- Ability to be pulled into wires without breaking A physical property of metals

A. Decomposition

B Diffusion

C. Distillation

D. Ductile

39- A rod or a plate which carries electricity in or out of an electrolyte during electrolysis Can be Inert Electrode such as Graphite (Carbon) or Platinum, or Reactive Metal Electrodes such as Copper, etc

A. Electrode

B Electronic Configuration

C. Electrolysis

D. Element

40- The process in which electrical energy is used to break down or decompose a compound

A. Electrode

B Electronic Configuration

C. Electrolysis

D. Element

41- The arrangement of electrons in the various shells of an atom or a molecule

A. Electrode

B Electronic Configuration

C. Electrolysis

D. Element

42- A pure substance made from only one type of atom It cannot be separated into simpler substances by chemical processes or by electricity

A. Electrode

B Electronic Configuration

C. Electrolysis

D. Element

43- Shows the types of elements present in the simplest ratio in the compound

A. Empirical Formula

B Electronic Configuration

C. Electrolysis

D. Element

44- The point in a titration at which an indicator changes colour

A. Empirical Formula

B End Point

C. Energy Profile Diagram

D. Enzymes

45- Shows the activation energy (E_a) required and the enthalpy change (ΔH) for a chemical reaction

A. Empirical Formula

B End Point

C. Energy Profile Diagram

D. Enzymes

**46- Substances that catalyse the chemical reactions in plants and animals
Often known as biological catalysts**

A. Empirical Formula

B End Point

C. Energy Profile Diagram

D. Enzymes

47- A chemical reaction that involves a carboxylic acid reacting with an alcohol to form an organic compound called esters

A. Esterification

B End Point

C. Energy Profile Diagram

D. Enzymes

48- A reaction that gives off heat energy to the surroundings

A. Esterification

B End Point

C. Energy Profile Diagram

D. Exothermic Reaction

49- The conversion of glucose by microorganisms such as yeast into ethanol and carbon dioxide

A. Fermentation

B Fractional Distillation

C. Filtration

D. Fuel Cell

50- The process of separating an insoluble solid from a liquid or a solution using filter paper

A. Fermentation

B Fractional Distillation

C. Filtration

D. Fuel Cell

51- A process that separates the components in a mixture on the basis of their different boiling points The components with the lowest boiling point boils off first and is distilled over

A. Fermentation

B Fractional Distillation

C. Filtration

D. Fuel Cell

52- A chemical cell in which reactants (usually a fuel and oxygen) are continuously supplied to produce electricity directly

A. Fermentation

B Fractional Distillation

C. Filtration

D. Fuel Cell

53- The warming of the earth by greenhouse gases Also known as the Greenhouse Effect

A. Global Warming

B Fractional Distillation

C. Greenhouse Effect

D. Group

54- A vertical column of elements in The Periodic Table

A. Global Warming

B Fractional Distillation

C. Greenhouse Effect

D. Group

55- A process where nitrogen and hydrogen react to produce the ammonia gas in a reversible reaction

A. Hydrocarbons

B Haber Process

C. Homologous Series

D. Hypothesis

56- A family of organic compounds with members of the family having the same general formula and similar chemical properties

A. Hydrocarbons

B Haber Process

C. Homologous Series

D. Hypothesis

57- A tentative explanation for an observation or pattern among observations that can be tested by further investigations

A. Hydrocarbons

B Haber Process

C. Homologous Series

D. Hypothesis

58- Substances that slows down the speed of chemical reactions

A. Ionic Equation

B Inhibitors

C. Isomers

D. Isotopes

59- Compounds that have the same molecular formula but different structural formulae

A. Ionic Equation

B Inhibitors

C. Isomers

D. Isotopes

60- Atoms of the same element that have the same atomic number but different nucleon numbers

A. Ionic Equation

B Inhibitors

C. Isomers

D. Isotopes

61- All matter is made up of tiny particles and that these particles are in constant, random motion.

A. Ionic Equation

B Inhibitors

C. Kinetic Particle Theory

D. Isotopes

62- The reactant that is completely used up in a chemical reaction It determines or limits the amount of products formed in a chemical reaction

A. Limiting Reactant

B. Metals

C. Hydrocarbons

D. Locating Agents

63- A substance that has mass and occupies space 3 states of matter are solid, liquid and gas

A. Limiting Reactant

B. Metals

C. Matter

D. Agents

64- Force of attraction between positive metal ions and the 'sea of delocalized electrons

A. Metallic Bond

B. Metals

C. Matter

D. Mineral

65- A naturally occurring substance (elements or compounds) in rocks

A. Metallic Bond

B. Metals

C. Matter

D. Mineral

66- It refers to the mass of one mole of a substance. Unit is gmol^{-1} Has the same value as A_r or M_r

A. Metallic Bond

B. Molar Mass

C. Matter

D. Mineral

67- A group of two or more atoms that are chemically held together by covalent bonds

A. Metallic Bond

B. Molecule

C. Molecular Formula

D. Mineral

68- Shows the exact amount of atoms of each element in a molecule

A. Metallic Bond

B. Molecule

C. Molecular Formula

D. Monomer

69- A small molecule which can be joined together in large numbers to form one big molecule known as polymer

A. Metallic Bond

B. Molecule

C. Molecular Formula

D. Monomer

70- A polymerisation reaction where monomer units join together without losing any molecules or atoms

A. Metallic Bond

B. Addition Polymerisation

C. Molecular Formula

D. Monomer

Question 2: True Or False

1- Biodegradable It is a biological term which means that substance cannot be broken down into simpler substances by bacteria in the soil

(True) (False)

2- Neutralisation The reaction between an acid and a base to produce a salt and water only

(True) (False)

3- Noble Gases Gases that are reactive and do not form compounds because they have the duplet or octet configuration (noble gas structure)

(True) (False)

4- Oxidation A reaction where a substance gains oxygen or loses hydrogen Also defined as the loss of electron(s) or the increase in oxidation state of the element

(True) (False)

5- Oxidising Agent A substance that brings about oxidation of another substance It is itself reduced in the process of oxidising others An oxidising agent is an acceptor of electrons

(True) (False)

6- pH Scale A scale that measures the acidity only of a solution

(True) (False)

7- Pollutant Any substance that is harmful to living things or to the environment

(True) (False)

8- Physical Change A change to a substance in which no new substance is formed

(True) (False)

9- Precipitate An insoluble solid that is produced in a solution as a result of a chemical reaction

(True) (False)

10- Protein A natural polymer of amino acids

(True) (False)

11- Qualitative Analysis The process of identification of cations and anions.

(True) (False)

12- Quantum theory: The branch of physical chemistry that describes how energy can only exist at certain levels and makes generalizations about how atoms behave from this assumption.

(True) (False)

13- Redox Reaction A reaction where both oxidation and reduction take place unsimultaneously

(True) (False)

14- Relative Atomic Mass (Ar) The number of times the mass of one atom of an element is heavier than 1/12 of the mass of a carbon-12 atom

(True) (False)

15- Residue The solid which remains on the filter paper after filtration process

(True) (False)

16- Rf Value The ratio between the distance travelled by the substance and the distance travelled by the solvent, on the chromatography paper

(True) (False)

17- R.T.P Room temperature and volume

(True) (False)

18- Salt The ionic compound formed by the replacement of one or more hydrogen ions of an acid by a metallic ion or an ammonium ion

(True) (False)

19- Solute The substance that dissolves in a solvent to form a solution

(True) (False)

20- Solution A mixture made up of a solvent dissolved in a solute

(True) (False)

21- Steel An alloy of iron and copper

(True) (False)

22- Stoichiometry Shows the relationship between the amounts (measured in moles) of reactants and products involved in a chemical reaction

(True) (False)

23- Sublimation The process of changing from the solid state directly to the gaseous state without passing through the liquid state

(True) (False)

24- Suspension A mixture of a liquid and an insoluble solid where the insoluble solid remains suspended throughout the solution

(True) (False)

25- Titration The gradual addition of a solution from a burette to another solution in a conical flask until the chemical reaction between the two solutions is complete

(True) (False)

26- Third Law of Thermodynamics The entropy of a hypothetical pure, perfect, crystalline substance at absolute zero temperature is one

(True) (False)

27- Unshared electron pair: two electrons that involved in chemical bonding. Also frequently referred to as a "lone pair".

(True) (False)

28- Valency The number of bonds that is formed by an atom with other atoms
Example, carbon has a valency of four since it forms four covalent bonds

(True) (False)

29- Voltaic Cells Electrochemical cells in which spontaneous chemical reactions produce electricity; also called galvanic cells.

(True)

(False)

20- Water of Crystallisation Water molecules that are chemically bonded in the crystals of some salts

(True) (False)

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WITH MY BEST WISHES