

GLOSSARY

The number following each entry is the page number where the term is defined or first mentioned.

- ACCURATE MEASUREMENT** – a measurement that is close to the CORRECT or ACCEPTED value (28)
- ACID** – a compound whose formula starts with “H” (74)
- ACTINIDE** – an element in the row underneath the main part of the table, starting with actinium (161)
- ALCOHOL** – an organic compound containing an OH group (233)
- ALDEHYDE** – an organic compound containing a CHO group at the end of a hydrocarbon chain (234)
- ALKALI METAL** – an element in the first column of the periodic table (except hydrogen) (161)
- ALKALINE EARTH METAL** – an element in the second column of the periodic table (161)
- ALKANE** – a hydrocarbon in which all the carbon atoms are connected by single bonds (215)
- ALKENE** – an organic compound containing a carbon–carbon double bond (226)
- ALKYL GROUP** – an alkane which has lost one hydrogen atom (217)
- ALKYL HALIDE** – an alkane having a halogen attached (224)
- ALKYNE** – an organic compound containing a carbon–carbon triple bond (226)
- ALPHA PARTICLE** – a He^{2+} ion which is given off by a radioactive atom (142, 143)
- AMIDE** – an organic compound containing a CONH_2 group (236)
- AMINE** – an organic compound containing an NH_2 group (236)
- AMINO ACID** – a carboxylic acid with an amine group at the 2–position (237)
- ANION** – an ion with a NEGATIVE charge (68)
- AQUEOUS SOLUTION** – a solution in which the solvent is WATER (51)
- AROMATIC MOLECULE** – a molecule containing one or more benzene rings (231)
- ASYMMETRICAL MOLECULE** – a molecule in which one end is different than the other (200)
- ATOM** – the smallest possible unit of an element which retains the fundamental properties of the element (49)
- ATOMIC MASS** – the total number of protons and neutrons in an atom (146)
- ATOMIC NUMBER** – the number of protons in the nucleus of an atom; also, the charge on the nucleus (145)
- AVOGADRO’S HYPOTHESIS** – equal volumes of gases, at the same temperature and pressure, contain the same number of particles (77)
- AVOGADRO’S NUMBER** – the number of particles in 1 mol of a substance = 6.02×10^{23} (83)
- BALANCED EQUATION** – a chemical reaction equation in which mass, atoms, and electrical charge are conserved (107)
- BASE** – a compound that has a chemical formula ending with OH (116)
- BASE UNIT** – one of the basic units in SI measurement (such as gram, metre, second and mole) (16)
- BETA PARTICLE** – a high energy electron emitted directly from an atomic nucleus (142)
- BINARY COMPOUND** – a compound made of two different types of atom (73)
- BOHR MODEL (OF THE ATOM)** – a model in which the electrons in an atom are restricted to having certain specific energies and are restricted to following specific paths at a fixed distance from the nucleus (144)

- BOILING TEMPERATURE** – the temperature at which a liquid changes into the gas phase. At the boiling temperature the liquid and gas phases co-exist. (60)
- CARBOXYLIC ACID** – an organic compound which contains a COOH group (236)
- CATION** – an ion with a POSITIVE charge (68)
- CHEMICAL CHANGE** – a change in which new substances are formed (59)
- CHEMICAL PROPERTY** – the ability of a substance to undergo chemical reactions and change into new substances, either by itself or with other substances (44)
- CHEMICAL REACTION EQUATION** – an equation that shows the chemicals used up and produced during a chemical reaction (105)
- CHEMICAL WORD EQUATION** – uses words to describe the REACTANTS and PRODUCTS (105)
- CHEMISTRY** – the science concerned with the properties, composition and behaviour of matter (44)
- CHROMATOGRAPHY** – a separation process in which different dissolved substances in a solution (the mobile phase) preferentially move through an absorbent material (the stationary phase) and are separated according to the relative attractions of the dissolved solids to the mobile phase or stationary phase (57)
- CIS ISOMER** – an isomer in which attached groups are on the same side of a double bond (230)
- CLOSED SHELL** – an electron shell which contains its maximum number of electrons (154)
- CLOSED SYSTEM** – a system is closed if nothing can enter or leave it (105)
- COEFFICIENT** – the number shown in front of each species involved in a chemical reaction (105)
- COMBINATION REACTION** – see SYNTHESIS
- COMBINING CAPACITY** – see VALENCE (as a noun)
- COMBUSTION** – a general term referring to the rapid reaction of a substance with oxygen to produce substantial amounts of heat, and usually a flame (116)
- COMPOUND** – a pure substance made of two or more types of atoms (51)
- CONCENTRATED SOLUTION** – a solution with a relatively high concentration of a particular substance (96)
- CONCENTRATION** (of a substance in solution) – the amount of the substance which exists in a given volume of the solution (96)
- CONDENSATION TEMPERATURE** – the temperature at which a gas changes into the liquid phase. At the condensation temperature the liquid and gas phases co-exist. (60)
- CONSERVATION LAW** – an experimentally observed law which states what is CONSERVED (unchanged) in a special set of circumstances (106)
- CONSERVED QUANTITY** – a quantity which does not change during a closed system reaction (106)
- CONTROLLED FIRE** – a fire which is contained in a beaker, flask or test tube, such that the fire can be put out by placing a watch glass or inverted beaker over the top of the container and smothering the fire (5)
- CONVERSION FACTOR** – is a fractional expression relating or connecting two different units (9)
- CORE** – the set of electrons with the configuration of the nearest noble gas having an atomic number LESS than that of the atom being considered (155)
- COVALENT BOND** – a bond which involves the equal sharing of electrons (176)
- CRYSTAL LATTICE** – the orderly arrangement of particles which exists within a crystal (209)
- CYCLOALKANE** – a hydrocarbon chain which is connected in a head-to-tail "circle"; also called a cyclic hydrocarbon (222)

- DATA** – quantitative information which is experimentally-determined or obtained from references (41)
- DECOMPOSITION REACTION** – involves breaking down a molecule into simpler substances (114)
- DENSITY** – the mass contained in a given volume of a substance, calculated from the formula $d = \frac{m}{V}$ (24)
- DERIVED QUANTITY** – a number made by combining two or more other values (23)
- DERIVED UNIT** – a unit which is made by combining two or more other units (23)
- DESCRIPTION** – a list of the properties of something (41)
- DEUTERIUM** – an isotope of hydrogen having an atomic mass of 2; sometimes call “heavy hydrogen” (148)
- DIATOMIC SPECIES** – a chemical species that is made up of two atoms (which may be the same or different types) (68)
- DIFFUSION** – the intermingling of fluids as a result of motion within the fluid (this applies to both gases and liquids) (46)
- DILUTE SOLUTION** – a solution with a relatively low concentration of a particular substance (96)
- DIPOLE** – a partial charge separation existing when one end of a molecule (or bond) has a slight excess of positive charge and the other end of the molecule (or bond) has a slight excess of negative charge (179)
- DIPOLE-DIPOLE FORCE** – a bonding force which exists as a result of an electrostatic attraction between molecules having permanent dipoles (199)
- DISSOCIATION REACTION** – a reaction involving separating previously-existing ions in an ionic solid (210)
- DISTILLATION** – a separation process in which a liquid is boiled and the resulting vapour is condensed to a liquid by being passed through a condenser. Since different liquids boil at different temperatures, mixtures of liquids can be separated by the distillation process. (53)
- DOUBLE REPLACEMENT or METATHESIS REACTION** – a reaction which involves an exchange of atoms or groups between two different compounds (115)
- DUCTILITY** – the ability of a substance to be stretched or drawn into wires (46)
- ELECTRON CONFIGURATION** – a description of which orbitals in an atom contain electrons and how many electrons are in each orbital (154)
- ELECTRON-DEFICIENT MOLECULE** – a molecule in which one or more atoms (other than hydrogen) does not possess a full octet of electrons (186)
- ELECTRON DOT DIAGRAM** – see LEWIS STRUCTURE
- ELECTRONEGATIVITY** – the tendency of the atom to attract electrons from a neighbouring atom (173)
- ELECTROSTATIC FORCE** – a force existing as a result of the attraction or repulsion between two charged particles (165)
- ELEMENT** – a substance which cannot be separated into simpler substances as a result of any chemical process (49)
- EMERGENCY EQUIPMENT** – equipment which is intended to be used only in the event of an emergency (1)
- EMPIRICAL FORMULA** (sometimes called the **SIMPLEST FORMULA**) – the smallest whole-number ratio of atoms which represents the molecular composition of a species (91)
- ENDOTHERMIC REACTION** – a reaction which absorbs heat from its surroundings (120)
- ENERGY LEVEL** – a specific amount of energy which an electron in an atom can possess (151)
- ENTHALPY** – the heat contained in a system (121)

- EQUIVALENCE POINT** or **STOICHIOMETRIC POINT** – the point in a titration where the mole ratio of the reacting species equals the ratio of the coefficients of the species in the balanced reaction equation (130)
- ESTER** – an organic compound in which a COO group connects two hydrocarbon chains (238)
- ETHER** – a compound in which an oxygen joins two hydrocarbon groups (235)
- EVAPORATION (as a method of physical separation)** – the process of allowing the liquid in a solid-in-liquid solution to evaporate or to be boiled away, leaving the solid (53)
- EXCESS REACTANT** – a reactant which is not completely used up in a reaction (132)
- EXOTHERMIC REACTION** – a reaction which gives off heat to its surroundings (119)
- EXPERIMENT** – a test or a procedure that is carried out in order to discover a result (41)
- EXPERIMENTAL UNCERTAINTY** – the estimated amount by which a measurement might be in error (34)
- EXPONENTIAL EQUIVALENT** – an exponential number which can replace an SI prefix symbol (for example, “ 10^3 ” is the exponential equivalent of “k”) (17)
- EXTENSIVE PROPERTY** – a physical property which depends on the amount of the substance present (44)
- FAMILY** – see GROUP
- FILTRATE** – the liquid which passes through a filter paper (53)
- FILTRATION** – the separation of an undissolved solid from a liquid by passing the liquid through a filter paper, so as to leave the solid behind (53)
- FREEZING TEMPERATURE** – the temperature at which a liquid changes into the solid phase. At the freezing temperature the solid and liquid phases co-exist. (60)
- FUNCTIONAL GROUP** – a specific group of atoms which exists in a molecule and gives a molecule an ability to react in a specific manner or gives it special properties (233)
- GAMMA PARTICLE** – high energy radiation given off by the nucleus (142)
- GRAVITY SEPARATION** – any of several separation methods which separate the components of a mechanical mixture according to their densities. The methods include gold panning, mechanical shaking, froth flotation and centrifugation. (56)
- GROUP** or **FAMILY** – the set of all the elements in a given column going down the table (161)
- HALOGEN** – an element in the 17th column of the periodic table (headed by fluorine) (161)
- HAND SEPARATION** – the separation of a mechanical mixture by bare hand, sieve or magnet (53)
- HARDNESS** – the ability of a solid to resist abrasion or scratching (46)
- HETEROGENEOUS SUBSTANCE** – a substance consisting of more than one phase (50)
- HOMOGENEOUS SUBSTANCE** – a substance consisting of only one phase (50)
- HYDRATE** – a molecule which includes one or more water molecules in its crystal structures (72)
- HYDROCARBON** – a compound made of carbon and hydrogen (116)
- HYDROGEN BOND** – a bond which exists as a result of a strong dipole-dipole attraction between molecules having H-F, H-O or H-N bonds (202)
- HYPOTHESIS** – a SINGLE, UNPROVEN assumption or idea which attempts to explain why nature behaves in a specific manner. When initially put forward, hypotheses are tentative but, if they survive testing, eventually gain general acceptance. (41)
- IMMISCIBLE LIQUIDS** – liquids which are insoluble in each other (54)

- INDICATOR** – a coloured dye which changes colour when an acidic solution has been exactly neutralized by a basic solution, or vice versa (130)
- INORGANIC NOMENCLATURE** – the naming of elements and inorganic compounds (65)
- INTENSIVE PROPERTY** – a physical property which depends solely on the nature of a substance, and NOT on how much of a substance is present (44)
- INTERMOLECULAR FORCE** – a force which holds complete, neutral molecules next to one another (179)
- INTERPRETATION** (or “inference”) – an attempt to put meaning into an observation (41)
- INTRAMOLECULAR FORCE** – a force which holds atoms together to make a molecule (179)
- ION** – an atom or molecule which possesses an electrical charge (49)
- IONIC BOND** – a bond formed by the attraction of positive ions to negative ions (172)
- IONIC COMPOUND** – a compound made up of ions (70)
- IONIC SOLID** – a solid whose crystal structure is made up of ions (209)
- IONIZATION ENERGY** – the energy required to remove an electron from a neutral atom (168)
- IONIZATION REACTION** – a reaction which involves the breaking up of a neutral molecule into ions (210)
- ISOTOPES** – atomic species having the same atomic number but different atomic masses (148)
- KETONE** – an organic compound containing a C=O group at a position other than at the end of a hydrocarbon chain (235)
- KINETIC ENERGY** – the energy that molecules possess as a result of their motion (62)
- LANTHANIDE** – an element in the row underneath the main part of the table, starting with lanthanum (161)
- LAW** – a broad generalization or summary statement which describes a large amount of experimental evidence stating how nature behaves when a particular situation occurs (41)
- LAW OF CONSERVATION OF ATOMS** – the total number and type of atoms in a closed system does not change during a chemical reaction (106)
- LAW OF CONSERVATION OF ELECTRICAL CHARGE** – the total electrical charge in a closed system does not change during a chemical reaction (106)
- LAW OF CONSERVATION OF ENERGY** – the total energy in a closed system does not change during a chemical reaction (106)
- LAW OF CONSERVATION OF MASS** – the total mass in a closed system does not change during a chemical reaction; that is, the mass of the reactants equals the mass of the products (106)
- LAW OF CONSTANT COMPOSITION** – see LAW OF DEFINITE PROPORTIONS
- LAW OF DEFINITE PROPORTIONS (or LAW OF CONSTANT COMPOSITION)** – every pure sample of a particular compound always contains the same proportion by mass of the elements in the compound (140)
- LAW OF MULTIPLE PROPORTIONS** – when different masses of one element combine with a specific mass of a second element, the mass ratios of the first element are small whole number ratios (141)
- LEADING ZERO** – a zero digit which is not significant and only serves to hold the place value of the following digits (37)
- LEWIS STRUCTURE** – a diagram showing how the valence electrons are distributed in an atom, ion or molecule; also called an electron dot diagram (172)
- LIMITING REACTANT** – a reactant which sets a limit on the amount of product which can be formed (132)

- LONDON FORCES** – weak attractive forces which arise as a result of temporary dipolar attractions between neighbouring atoms (179)
- LUSTRE** – the manner in which a solid surface reflects light (46)
- MALLEABILITY** – the ability of a substance to be rolled or hammered into thin sheets (46)
- MASS** – the quantity of matter in an object (24)
- MATTER** – anything that has mass and occupies space (44)
- MECHANICAL MIXTURE** – a heterogeneous mixture of two or more substances (50)
- MELTING TEMPERATURE** – the temperature at which a solid changes into the liquid phase. At the melting temperature the solid and liquid phases co-exist. (60)
- METALLOID** – see semiconductor
- METATHESIS REACTION** – see DOUBLE REPLACEMENT REACTION
- METRIC CONVERSION** – a unit conversion between a prefix symbol and its exponential equivalent (19)
- MISCIBLE LIQUIDS** – liquids that are mutually soluble in each other in all proportions (54)
- MIXTURE** – a system made up of two or more substances, such that the relative amounts of each substance can be varied (50)
- MOLAR CONCENTRATION** or **MOLARITY** (of a substance in solution) – the number of moles of the substance contained in 1 L of solution (96)
- MOLARITY** – see MOLAR CONCENTRATION
- MOLAR MASS** – the mass of ONE MOLE of particles. The molar mass of an element is the mass shown on the periodic table, expressed in grams (79)
- MOLAR VOLUME** (of a substance) – the volume occupied by one mole of the substance. The molar volume of any gas at STP is 22.4 L. (82)
- MOLE** – the fundamental unit used for measuring amount. One mole of particles is 6.02×10^{23} particles. (Strictly speaking, one mole is the number of carbon atoms in exactly 12 g of carbon-12.) (79, 83)
- MOLECULAR SOLID** – a solid whose crystal structure is made of neutral molecules (209)
- MOLECULE** – a cluster of two or more atoms, held together strongly by electrical forces (49)
- MONATOMIC SPECIES** – a chemical species that is made up of only ONE atom (68)
- NEUTRALIZATION REACTION** – the reaction between **H** in an acid and **OH** in a base to make **H₂O** (116)
- NEUTRAL SOLUTION** – a solution which has no excess of either an acid or a base (116)
- NOBLE GAS** – an element in the 18th column of the periodic table (headed by helium) (161)
- OBSERVATION** – *qualitative* information collected through the direct use of our senses (41)
- OCTET RULE** – states that atoms in columns 14 to 17 of the periodic table tend to form covalent bonds so as to have eight electrons in their valence shells (176)
- OPEN SHELL** – a shell containing less than its maximum number of electrons (166)
- OPEN SYSTEM** – a system is OPEN if things can enter and leave it (105)
- ORBITAL** – the actual region of space occupied by an electron in a particular energy level (152)
- ORGANIC CHEMISTRY** – the chemistry of carbon compounds (213)
- OUTER ELECTRON** – see VALENCE ELECTRON

- PARTICLE** – a general term used to describe a small bit of matter such as an atom, molecule or ion (49)
- PERCENTAGE COMPOSITION** – the percentage (by mass) of the species in a chemical formula (90)
- PERCENTAGE PURITY** – the amount of pure chemical actually present in a sample as a percentage of the amount of the impure chemical present; calculated from the expression:
Percentage Purity = (mass of pure chemical / mass of impure chemical) x 100% (134)
- PERCENTAGE YIELD** – the amount of a product actually produced as a percentage of the expected amount; calculated from the expression:
Percentage Yield = (mass of product obtained / mass of product expected) x 100% (134)
- PERIOD** – the set of all the elements in a given row going across the table (161)
- PERIODIC LAW** – the properties of the chemical elements recur periodically when the elements are arranged from lowest to highest atomic numbers (160)
- PHASE** – any part of a system which is uniform in both its composition and properties (49)
- PHYSICAL CHANGE** – a change in a substance's phase, such that no new substances are formed (59)
- PHYSICAL PROPERTY** – a property that can be found without creating a new substance (44)
- POLARIZATION** – the repulsion of the electrons on one atom by the electrons on a second atom, combined with the simultaneous attraction of the electrons on one atom for the nucleus of a second atom (180)
- POLAR MOLECULE** – a molecule which has a partial positive charge at one end and a partial negative charge at the other end (199)
- POLYATOMIC SPECIES** – a general term for a chemical species made up of many atoms (68)
- POLYELECTRONIC ATOM** – an atom having more than one electron (153)
- PRECIPITATE** – a solid formed when two liquids or aqueous solutions react (113)
- PRECISE MEASUREMENT** – a reproducible measurement. In general, the more precise a measurement, the more SIGNIFICANT DIGITS it possesses. (28)
- PREFIX-NAMING SYSTEM** – a method of naming binary compounds made of nonmetals in which the number of each type of atom in the molecule is indicated by a prefix such as mono, di, tri, tetra, etc. (73)
- PREFIX SYMBOL** – a symbol which stands for a power of 10 (for example "c" stands for "10⁻²") (17)
- PRODUCT** – a chemical which is formed as a result of a chemical reaction (105)
- PROTECTIVE EQUIPMENT** – equipment which is used to protect you from the effects of hazardous chemicals or material BEFORE any problems arise (5)
- PURE SUBSTANCE** – a substance that is homogeneous and has an unchangeable composition (50)
- QUALITATIVE INFORMATION** – NON-NUMERICAL information (41)
- QUANTITATIVE INFORMATION** – NUMERICAL information (41)
- QUANTUM OF ENERGY** – the energy difference between two particular energy levels in an atom (151)
- RADIOACTIVITY** – the ability of an atom to give off energy and nuclear particles (142)
- REACTANT** – a chemical which is present at the start of a chemical reaction (105)
- RECRYSTALLIZATION** – a purification and separation process in which a solid is dissolved in a suitable solvent and the mixture is allowed to cool or evaporate until purified crystals of the solid are deposited in the mixture (55)
- REPRESENTATIVE ELEMENTS** – the groups of elements which includes columns 1, 2 and 13 to 18 of the periodic table (161)

- RESIDUE** – the solid which remains behind on a filter paper after a filtration (53)
- RESONANCE STRUCTURES** – structures differing only in the placement of alternating double bonds (231)
- ROTATIONAL ENERGY** – kinetic energy which a molecule possesses as a result of rotation about one of its molecular axes (62)
- RUTHERFORD MODEL (OF THE ATOM)** – a model in which the atom consists of a tiny, positively-charged nucleus surrounded by a cloud of negatively-charged electrons (143)
- SALT** – an ionic compound that is neither an acid nor a base (116)
- SATURATED HYDROCARBON** – a hydrocarbon in which the carbon atoms are connected by single bonds; in other words, an alkane (215)
- SATURATED SOLUTION** – a solution which has dissolved as much of a particular solute as possible (193)
- SEMICONDUCTOR** – a nonmetal having an electrical conductivity which increases with temperature. Semiconductors were formerly called metalloids or semimetals. (163)
- SEMIMETAL** – see semiconductor
- SHELL** – the set of all orbitals having the same n -value. For example, the four orbitals consisting of the 2 s and three 2 p orbitals is a shell. (152)
- SIGNIFICANT FIGURE** – a measured or meaningful digit (27)
- SINGLE REPLACEMENT REACTION** – involves replacing **one** atom in a compound by another atom (114)
- SOLUBILITY** (of a solute) – the maximum amount of a solute which can dissolve in a given amount of solvent at a given temperature (193)
- SOLUTE** – the component in a solution which exists in the smaller quantity (51)
- SOLUTION** – a homogeneous mixture of two or more substances (50)
- SOLUTION CHEMISTRY** – the study of chemical reactions that occur in solutions (193)
- SOLVATION** – the interaction between a solute and a solvent (209)
- SOLVENT** – the component in a solution which exists in the greater quantity (51)
- SOLVENT EXTRACTION** – a separation process in which one of more components of a mixture are preferentially dissolved by the addition of a solvent. The added solvent and the dissolved substances are then removed, leaving the remainder of the original mixture behind. (54)
- STOCK SYSTEM** (of naming ions) – a method of naming metal ions in which the charge is indicated by a Roman numeral, in parentheses, immediately following the name (69)
- STOICHIOMETRIC POINT** – see EQUIVALENCE POINT
- STOICHIOMETRY** – the relationship between the amounts of reactants used in a chemical reaction and the amounts of products produced by the reaction (123)
- STP** – Standard Temperature and Pressure = 0°C and 101.3 kPa (82)
- STRUCTURAL ISOMERS** – compounds which have the same molecular formula but a different arrangement of atoms (222)
- SUBSHELL** – a set of orbitals of the same type. For example, the set of three 2 p orbitals is a subshell. (152)
- SUBSTANCE** – something with a unique and identifiable set of properties (44)
- SYNTHESIS** or **COMBINATION REACTION** – involves the combination of two or more substances to form (or "synthesize") a compound (114)
- SYSTEM** – the part of the universe being studied in a given situation (49)

- TERNARY COMPOUND** – a compound made of three different types of atoms (73)
- THEORY** – a set of hypotheses that ties together a large number of observations of the real world into a logically consistent and understandable pattern. In other words, a theory is a TESTED, REFINED and EXPANDED explanation of why nature behaves in a given way. (41)
- THOMSON MODEL (OF THE ATOM)** – a model which proposed that an atom consisted of a ball of positive charge having negative charges distributed through the ball (141)
- TITRATION** – a process by which a measured amount of a solution is reacted with a known volume of another solution (one of the solutions has an unknown concentration) until a desired equivalence point is reached (130)
- TRAILING ZERO** – a zero digit which is significant (37)
- TRANSLATIONAL ENERGY** – kinetic energy which a molecule or atom possesses as a result of motion in a straight line (62)
- TRANS ISOMER** – an isomer in which attached groups are on opposite sides of a double bond (230)
- TRANSITION METAL** – an element in columns 3 to 12 of the periodic table (161)
- TRIATOMIC SPECIES** – a chemical species that is made up of three atoms (which may be the same or different types) (68)
- TRITIUM** – an isotope of hydrogen with an atomic mass of 3; sometimes called “radioactive hydrogen” (148)
- UNCONTROLLED FIRE** – a fire which is not minor and will possibly continue to spread (6)
- UNIT CONVERSION** – a calculation method which uses conversion factors to change the units associated with an expression to a different set of units (10)
- UNIT SYMBOL** – a symbol which stands for one of the SI base units (for example, **g** stands for grams) (16)
- UNSATURATED HYDROCARBON** – a general term for alkenes and alkynes (226)
- VALENCE** (as a noun) – the number of unpaired electrons on the atom; also called combining capacity (168)
- VALENCE ELECTRON** – an electron which can take part in a chemical reaction; also, any electron in an atom except those in the core, or in filled d- or f-subshells. In other words, electrons in OPEN shells. (157)
- VAN DER WAALS FORCE** – a general term referring to any of three types of weak intermolecular force, including the London force, dipole–dipole force and hydrogen bonding (179)
- VAPOUR** – the gaseous material formed by the evaporation of a substance which boils above room temperature (47)
- VAPOUR PRESSURE** – the pressure created by the vapour evaporating from a liquid (47)
- VIBRATIONAL ENERGY** – kinetic energy which a molecule possesses as a result of changes in its bond lengths and/or angles (62)
- VISCOSITY** – the *resistance* of a fluid to flow (46)
- VOLUMETRIC FLASK** – a special flask used to make up an exact volume of a solution. The flask has a narrow neck with a line etched around the neck. When filled to the etched line, the flask holds its exact rated volume. (97)