AS Chemistry Definitions List

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| Keyword | Definition |
| Activation Energy | Minimum energy **(1)** required before a reaction can occur or go or start **(1)** |
| Atomic number | Number of protons in one atom or nucleus **(1)**  Allow protons & electrons  do not allow protons + electrons or electrons **1** |
| Catalyst | A substance that speeds up the reaction / alters the rate but is chemically unchanged at the end / not used up Both ideas needed |
| Dynamic Equilibrium | Rate of forward reaction = rate backward reaction **(1)** concentration remains constant **(1)**  NOT ‘Equal’, Allow  ‘The same’ if clear that means constant **2** |
| Electronegativity | Tendency **or** strength **or** ability **or** power of an atom/element/nucleus to attract/withdraw electrons / e– density / bonding pair / shared pair **1**  In a covalent bond (tied to M1 – unless silly slip in M1)  (If molecule/ion then = CE = 0) (NOT electron (singular) for M1) **Mark as 2 + 2 1** |
| Empirical Formula | (simplest) ratio of atoms of each element in compound **(1)** |
| Enthalpy Change | Heat energy change **(1)**  Not energy on its own  measured at constant pressure **(1)**  Mark separately, ignore constant temperature statements **2** |
| First Ionisation Energy | Enthalpy/energy change/required when an electron is removed/ knocked out / displaced/ to form a uni-positive ion (ignore ‘minimum’ energy)**1**  from a gaseous atom (could get M2 from a correct equation here) (accept ‘Enthalpy/energy change for the process...’ followed by an appropriate equation, for both marks) (accept molar definitions)**1** |
| Hess’s Law. | (The enthalpy change for a reaction is) independent of the route **(1)** |
| Isotope | Atoms with the same number of protons / proton number **(1)**  NOT same atomic number  with different numbers of neutrons **(1)**  **NOT** different mass number / fewer neutrons |
| Le Chatelier’s Principle | Equilibrium opposes a change; (Q of L mark) **1** |
| Mass Number | p + n / number of nucleons  (accept protons and neutrons)  (Incorrect reference to electrons = contradiction) |
| Mean Bond Enthalpy | (Energy required) to break a given covalent bond **(1)**  averaged over a range of compounds **(1)**  Penalise first mark if ‘energy’ / ‘enthalpy’ evolved **2** |
| Oxidation | Loss (of electrons) **(1)** |
| Oxidising Agent | Species that Gains electrons (or removes electrons) **1** |
| Periodicity | Pattern in the change in the properties of a row of elements **(1)**  OR Trend in the properties of elements across a period         Repeated in the next row **(1)**  OR element underneath (or in same group) has similar properties |
| Rate of Reaction | (Measured) change in concentration (of a substance) in unit time / given time  May be written mathematically OR the gradient of the concentration (against) time**1** |
| Reducing Agent | A reducing agent loses (donates) electrons (1) |
| Reduction | Reduction involves gain of electrons (1) |
| Relative Atomic Mass | Average/mean mass of (1) atom(s) (of an element) **1**  1/12 mass of one atom of 12C **1**  **OR**  (Average) mass of one mole of atoms  1/12 mass of one mole of 12C  **OR**  (Weighted) average mass of all the isotopes  1/12 mass of one atom of 12C  **OR**  Average mass of an atom/isotope compared to C-12 on a scale in which an atom of C-12 has a mass of 12  Not average mass of 1 molecule  Allow the wording Average mass of 1 atom of an element compared to 1/12 mass atom of 12C (or mass 1/12 atom of 12C)  Allow if moles of atoms on both lines  Accept answer in words  Can have top line × 12 instead of bottom line ÷12  If atoms/moles mixed, max = 1 |
| Relative Molecular Mass | (ii) Mean /average mass of a molecule/entity/formula **1**  1/12th mass of atom of 12C  [Not 1/12th mass of molecule of 12C]  (mark independently) **1**  **OR** Mass of 1 mole of molecules/entities (1)  1/12thmass of 1 mole of 12C (1)  **OR** Average mass of a molecule/entity (1)  Relative to the mass of a 12C atom taken as 12 / 12.000 (1)  (Mean/average = stated or explained)  (mass = stated or explained)  (Penalise ‘weight’ once only)  (Ignore ‘average ‘ mass of 12C)  (Do not allow ‘mass of average molecule) |
| Standard Enthalpy of Combustion | Enthalpy change when 1 mol of a substance  (or compound) (QL mark) **1**  is (completely) burned in oxygen (or reacted in excess oxygen) **1**  at 298 K and 100 kPa (or under standard conditions) **1** |
| Standard Molar Enthalpy of Formation | (Enthalpy change) when 1 mol **(1)** of a compound is formed  from its constituent elements **(1)** in their standard states **(1)**  Allow energy or heat, Ignore evolved or absorbed  Mark each point independently (b) |