

Definitions for Chapter 21

	Definition	Description
1.	Homologous series	family of organic compounds with the same general formula, similar chemical properties, and successive members differing by CH_2
2	Structural isomers	Compounds that have the same chemical formula but different structures
3	Aliphatic compound	hydrocarbons that have straight or branched chains of carbon atoms, or rings of carbon but no benzene ring
4	Aromatic compound	A compound that contains a benzene ring
5	Octane number	Measure of the tendency of a fuel to resist knocking
6	Catalytic cracking	Breaking down of long-chain hydrocarbons into short chain hydrocarbons .
7	Heat of formation	Heat change that takes place when one mole of a compound is formed from its elements in their standard states.
8	Kilogram calorific value	Heat energy produced when 1Kg of the fuel is completely burned in oxygen.
9	Heat of reaction	heat in kilojoules released or absorbed when the number of moles of reactants indicated, in the balanced equation describing the reaction, react completely.
10	Heat of neutralisation	The heat change that occurs when one mole of H^+ ions from an acid reacts with one mole of OH^- ions from an alkali.
11	Bond Energy	amount of energy in kilojoules needed to break one mole of bonds of covalent bonds, all species being in the gaseous state.
12	Heat of combustion	The heat change which occurs when one mole of a substance is burnt in an excess of oxygen.
13	Hess's law	The heat change for reaction depends only on initial and final states of the system, and is independent of the path followed.
14	Law of conservation of energy	This states that energy can neither be created nor destroyed.