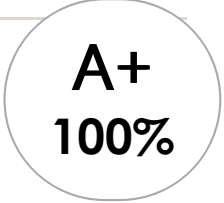


## 28 Multiple choice questions



A+  
100%

- a chemical reaction in which energy is released from the surroundings (negative)
  - respiration
  - endothermic reaction
  - rate of reaction
  - CORRECT: exothermic reaction**
  
- liquid is the process boiling, collecting and then cooling of the vapour to turn it back into liquid; it is used to purify liquids such as water
  - explosion
  - CORRECT: distillation**
  - pollution
  - respiration
  
- the burning of a fuel; heat and usually light are produced
  - respiration
  - explosion
  - CORRECT: combustion**
  - pollution
  
- a group of atoms forming part of the organic compound that influences the physical and chemical properties of the compound
  - CORRECT: functional group**
  - natural gas
  - petroleum
  - distillation
  
- weak intermolecular forces between molecules
  - isomers
  - explosion
  - fossil fuels
  - CORRECT: dispersion forces**

6. also referred to as the speed of a reaction, and may be expressed as the rate of decrease in the concentration of any reactant, or the rate of increase in the concentration of any product
- exothermic reaction
  - CORRECT: rate of reaction**
  - respiration
  - endothermic reaction
7. the lowest temperature at which a combustible substance will ignite and continue burning
- activation energy
  - functional group
  - CORRECT: ignition temperature**
  - isomers
8. a chemical reaction in which energy is absorbed from the surroundings (positive)
- respiration
  - exothermic reaction
  - CORRECT: endothermic reaction**
  - rate of reaction
9. the distillation of a liquid to separate the fractions with different boiling points present in the liquid; crude oil is fractionally distilled to obtain the various fractions, petrol kerosene etc.
- functional group
  - distillation
  - rate of reaction
  - CORRECT: fractional distillation**
10. a fossil fuel that is a mixture of mainly hydrocarbons; it is separated into the different fractions, which have different uses as fuel and for the synthesis of other compounds such as plastics
- catalyst
  - isomers
  - CORRECT: petroleum**
  - allotropes

11. a fossil fuel formed millions of years ago; it is burnt as fuel, usually in power stations
- CORRECT:** coal
  - IUPAC
  - catalyst
  - alkane
12. a substance that alters the rate of a chemical reaction but itself remains unchanged at the end of the reaction; since it remains effectively the same at the end of a reaction, only a small amount is required to catalyse the reaction; catalysts are specific for particular reactions
- CORRECT:** catalyst
  - coal
  - volatility
  - alkane
13. the process by which plants use the energy from sunlight to convert carbon dioxide and water into oxygen and the energy-rich sugar, glucose; energy is stored as carbohydrates
- allotropes
  - catalyst
  - CORRECT:** photosynthesis
  - pollution
14. the readiness of a liquid to vaporise or evaporate, especially at ordinary temperatures
- coal
  - catalyst
  - pollution
  - CORRECT:** volatility
15. molecules that have the same molecular formula but different structural formulae (the atoms are arranged differently in the molecules)
- CORRECT:** isomers
  - IUPAC
  - coal
  - catalyst

16. different forms of the same element in the same physical state; the atoms are arranged in different crystalline or molecular structures; consequently their physical properties, such as density, colour and hardness are different
- CORRECT: allotropes**
  - fullerenes
  - alkane
  - pollution
17. the minimal amount of energy that reactant molecules must possess in order
- CORRECT: activation energy**
  - distillation
  - ignition temperature
  - respiration
18. the very rapid combustion of a substance producing a sudden expansion of hot gases, accompanied by a shock wave that can shatter nearby objects
- pollution
  - combustion
  - respiration
  - CORRECT: explosion**
19. energy rich substances formed in the earth's crust over millions of years through the action of heat and pressure on decaying plant and animal remains
- distillation
  - isomers
  - fullerenes
  - CORRECT: fossil fuels**
20. a series of compounds, such as alkanes, that can represent a general molecular formula; they have similar and chemical properties
- fossil fuels
  - photosynthesis
  - CORRECT: homologous series**
  - combustion

21. a gas formed naturally on earth and consists mainly of methane, with small amounts of ethane and other compounds; it is used as a fuel
- IUPAC
  - catalyst
  - petroleum
  - CORRECT: natural gas**
22. a group of carbon structures with spherical or cylindrical shapes; they are an allotrope of carbon
- allotropes
  - CORRECT: fullerenes**
  - alkane
  - isomers
23. a process occurring in living cells whereby stored energy is released and made available for use by the organism; glucose reacts with oxygen giving carbon dioxide and water; energy is released in the process; it is the reverse of the photosynthesis reaction
- explosion
  - distillation
  - CORRECT: respiration**
  - combustion
24. the international union of pure and applied chemistry; this body draws up rules for systemic naming of compounds
- CORRECT: IUPAC**
  - coal
  - alkane
  - isomers
25. caused by the burning of fossil fuels; the oxides of carbon, nitrogen and sulfur are formed and these are harmful
- combustion
  - distillation
  - CORRECT: pollution**
  - explosion

26. simple hydrocarbon, such as methane or ethane, consisting of carbon and hydrocarbon atoms only with single bonds between carbon atoms
- IUPAC
  - fullerenes
  - CORRECT: alkane**
  - coal
27. organic compounds that contain carbon, hydrogen and oxygen; examples are glucose starch and cellulose; they are produced in plants by photosynthesis; respiration breaks them down within the body
- respiration
  - catalyst
  - allotropes
  - CORRECT: carbohydrates**
28. molecules that contain only carbon and hydrogen; the carbon chains can be of different lengths with different structure; straight chains, branching chains or rings
- explosion
  - isomers
  - respiration
  - CORRECT: hydrocarbons**