

- Cracking hydrocarbon molecules will result in
 - larger molecules with lower boiling points
 - larger molecules with higher boiling points
 - smaller molecules with lower boiling points
 - smaller molecules with higher boiling points
- Which equation represents a cracking reaction?
 - $C_{22}H_{44} + HBr \rightarrow C_{22}H_{45}Br$
 - $C_{22}H_{46} \rightarrow C_8H_{18} + C_{14}H_{28}$
 - $C_5H_{10} + Br_2 \rightarrow C_5H_{10}Br_2$
 - $C_5H_{12} + 8 O_2 \rightarrow 5 CO_2 + 6 H_2O$
- Which equation represents a simple example of cracking?
 - $S + O_2 \rightarrow SO_2$
 - $CH_4 + 2 O_2 \rightarrow CO_2 + 2 H_2O$
 - $N_2 + 3 H_2 \xrightarrow{600^\circ C} 2 NH_3$
 - $C_{14}H_{30} \xrightarrow{600^\circ C} C_7H_{16} + C_7H_{14}$
- Which balanced equation represents a cracking reaction?
 - $2 C_3H_6 + 9 O_2 \rightarrow 6 H_2O + 6 CO_2$
 - $C_{14}H_{30} \rightarrow C_7H_{16} + C_7H_{14}$
 - $C_{14}H_{28} + Cl_2 \rightarrow C_{14}H_{28}Cl_2$
 - $C_2H_6 + Cl_2 \rightarrow C_2H_5Cl + HCl$
- One of the main products of the cracking of crude oil is
 - glycerol
 - gasoline
 - natural gas
 - nylon
- The process of cracking large hydrocarbon molecules produces
 - smaller molecules with higher boiling points
 - smaller molecules with lower boiling points
 - polymer molecules with higher boiling points
 - polymer molecules with lower boiling points
- Cracking is a process used to increase the yield of both
 - gasoline and asphalt
 - gasoline and fuel oil
 - fuel oil and asphalt
 - fuel oil and grease
- Which balanced equation represents a cracking reaction?
 - $C_4H_{10} \rightarrow C_2H_6 + C_2H_4$
 - $C_4H_8 + 6 O_2 \rightarrow 4 CO_2 + 4 H_2O$
 - $C_4H_{10} + Br_2 \rightarrow C_4H_9Br + HBr$
 - $C_4H_8 + Br_2 \rightarrow C_4H_8Br_2$
- Petroleum is a complex mixture of
 - hydroxides
 - hydrocarbons
 - esters
 - ethers
- Which substance is the primary source of many textiles and plastics?
 - coal
 - wood
 - mineral ore
 - petroleum
- Petroleum is primarily a mixture of
 - alcohol molecules
 - ester molecules
 - hydrocarbon molecules
 - organic acid molecules
- Which of these gases obtained from petroleum is also known as bottled gas?
 - ethane
 - ethene
 - propane
 - propene
- A common gaseous fuel that is often found with petroleum is
 - carbon monoxide
 - carbon dioxide
 - methane
 - ethene
- The process of separating petroleum into components based on differences in their boiling points is called
 - cracking
 - hydrogenation
 - destructive distillation
 - fractional distillation

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15. Petroleum can be separated into different fractions by the process of fractional distillation because the fractions have
- A) the same boiling point
 - B) different boiling points
 - C) the same melting point
 - D) different melting points
16. Which process is used to separate a mixture of hydrocarbons with different boiling points?
- A) cracking
 - B) oxidation
 - C) fractional distillation
 - D) dehydration synthesis
17. Which products are obtained from the fractional distillation of petroleum?
- A) esters and acids
 - B) alcohols and aldehydes
 - C) soaps and starches
 - D) kerosene and gasoline
18. Common bottled gases obtained from petroleum are
- A) propane and butane
 - B) propane and carbon dioxide
 - C) butane and ammonia
 - D) butane and nitrogen
19. Kerosene is a mixture of compounds called
- A) esters
 - B) alcohols
 - C) aldehydes
 - D) hydrocarbons
20. Which substance is obtained primarily by the fractional distillation of petroleum?
- A) glycerine
 - B) kerosene
 - C) ethanol
 - D) acetone
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