

CHEMISTRY

BOOKS - MCGROW HILL EDUCATION CHEMISTRY (HINGLISH)

CARBON

Elementary Questions

1. Which of the following is an example of fossil fuel?

- A. coal gas
- B. coke
- C. natural gas
- D. producer gas



- 2. Most of the fuels are
 - A. carbon compounds with sulphur

- B. nitrogen compounds with carbon
- C. carbon compounds with hydrogen
- D. none of these



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3. Destructive distillation of coal leads to the formation of

A. wood

- B. kerosene
- C. ammoniacal liquor
- D. charcoal



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4. When steam is passed over hot coke, it produces

A. producer gas

- B. synthesis gas
- C. tear gas
- D. coal gas

Answer: B



- 5. Producer gas is a mixture of
 - A. carbon monoxide and nitrogen gas
 - B. carbon monoxide and hydrogen gas

- C. carbon monoxide and water vapour
- D. carbon monoxide and nitrous oxide

Answer: A



- 6. The fractional distillation of coaltar yields
 - A. carbon disulphide
 - B. carbon tetrachloride
 - C. kerosene oil

D. benzene

Answer: D



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7. Which of the following is not obtained on fractional distillation of petroleum?

A. Paraffin wax

B. Asphalt

C. Coal gas

D. Petroleum gas

Answer: C



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8. The property of an atom to form a bond with itself is known as

A. isomerism

B. catenation

C. allotropy

D. none of these

Answer: B



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9. In the hydrocarbon $HC\equiv C-H$,the covalency of carbon is

A. one

B. two

C. three

D. four

Answer: D



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10. Which of the following are isomers?

- A. ethane and propane
- B. ethane and ethene
- C. ethene and ethyne
- D. butane and isobutane

Answer: D



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11. A hydrocarbon is

- A. a compound containing carbon, hydrogen and oxygen.
- B. is sodium hydrogen carbonate.
- C. a compound containing carbon and hydro gen only.

D. a derivative of benzene.

Answer: C



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12. The formula of ethyne is

A. C_2H_2

B. C_6H_6

 $\mathsf{C}.\,C_2H_4$

D. C_2H_6

Answer: A



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13. The formula of tetrachloro methane is

A. $CClH_3$

B. CCl_2

C. $CHCl_3$

D. CCl_4

Answer: D

14. An unsaturated hydrocarbon

A. contains six carbon atoms

B. contains fewer hydrogen atoms than is needed for carbon to have its usual valency of four

- C. contains excess hydrogen
- D. contains a chain of carbon atom

Answer: B



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15. Water gas consists of

A. water vapour and coal dust

- B. a mixture of carbon monoxide and hydrogen
- C. a mixture of carbon monoxide and nitrogen

D. water vapour and methane

Answer: B



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16. The reaction of one mol of bromine with ethyne yields

A.
$$BrCH_2 - CH_2Br$$

$$B.BrCH = CHBr$$

$$\mathsf{C.}\,Br_2CH-CHBr_2$$

D. CH_3-CH_2Br

Answer: B



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17. Which of the following gas is known as illumi nating gas?

A. Ethane

B. Ethene

C. Ethyne

D. Propane

Answer: C



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18. The gas used in the welding and cutting of metals is

A. ethane

B. ethene

C. ethyne

D. propene

Answer: C



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19. The carbon atoms in diamond are bonded to each other by

- A. ionic bond
- B. Coordinate bond
- C. hydrogen bonds

D. covalent bonds

Answer: D



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20. Identify alkane from the following

A. C_2H_2

 $\operatorname{B.} C_2H_6$

 $\mathsf{C}.\,C_3H_6$

D. C_3H_4

Answer: B



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21. Which of the following compounds behave as an unsaturated hydrocarbon?

- A. butane
- B. ethane
- C. ethylalcohol
- D. ethene

Answer: D



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22. Neopentane and Isopentane are

A. allotropes

B. isobars

C. isomers

D. homologues

Answer: C

23. What type of reaction occurs between ethene and hydrogen?

A. addition

B. dehydration

C. substitution

D. oxidation

Answer: A



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24. Which of the following organic compound is used as a fuel?

A. HCOOH

B. $C_4 H_{10}$

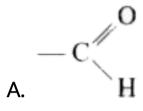
C. CH_3OH

D. CHCOOH

Answer: B



25. The functional group Aldehdye is a



$$C^{\circ}$$
B.

Answer: A



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26. Which of the following pairs are members of a homologous series?

A.
$$CH_3OCH_3$$
, $CH_3CH_2 - OH$

B.
$$CH_3 - CHO, CH_3CH_2CHO$$

$$C. CH_3CH_2COOH, CH_3COOCH_3$$

D.
$$(CH_3)_2CH - OH, CH_3CH_2 - OH$$

Answer: B



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27. Acetylene polymerizes to give

A. benzene

B. polyacetylene

C. butane

D. octane

Answer: A

28. Carboxylic group is present in

A. ethylene

B. methanoic acid

C. formaldehyde

D. ethanol

Answer: B



29. The variety of coal used as old house coal is

A. anthracite

B. peat

C. lignite

D. bituminous

Answer: D



30. Which of the following compounds has a double bond?

A.
$$C_{14}H_{28}$$

B.
$$C_{15}H_{32}$$

C.
$$C_{12}H_{22}$$

D.
$$C_{16}H_{34}$$

Answer: A



31. The number of isomers of C_6H_{14} is

A. 4

B. 5

C. 6

D. 17

Answer: B



32. Complete combustion of hydrocarbon produces

A.
$$CO+H_2O$$

B.
$$CO + H_2$$

$$\mathsf{C}.\,CO_2+H$$

D.
$$CO_2 + H_2O$$

Answer: D



33. Two neighbours of homologous series differ by

A. CH

B. CH_2

 $\mathsf{C}.\,CH_3$

D. CH_4

Answer: B



34. Urea was first organic compound to be synthesised by

- A. Laminar
- B. Wohlar
- C. Beryine
- D. Haber

Answer: B



35. The second homologue of alkyne is

A. CH

B. C_2H_2

 $\mathsf{C}.\,C_2H_4$

D. C_3H_4

Answer: D



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Higher Order Thinking Questions

1. Which	allotropic form	of	carbon	has	а	two
dimensio	nal sheet like s	ruc	ture?			

- A. Coal
- B. Coke
- C. Graphite
- D. Diamond



2. The natu	re of chemical	bonding in	graphite
is			

- A. covalent
- B. ionic
- C. coordinate
- D. metallic

Answer: A



3. In graphite, the different layers are held together by

A. ionic bonding

B. covalent bonding

C. van der Waals forces

D. metallic bonding

Answer: C



4. Carbon atom i	n diamond	are arranged	in
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- A. planar configuration
- B. tetrahedral configuration
- C. linear configuration
- D. octahedral configuration

Answer: B



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5. Dry ice is

A. solid	CO_2
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B. solid CO

C. solid SO_2

D. solid He

Answer: A



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6. Carbon monoxide is _____ oxide.

A. amphotenic

- B. acidic
- C. basic
- D. neutral

Answer: D



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7. Graphite is

- A. harder than diamond
- B. used as a lubricant

C. an amorphous allotropic form of carbon

D. oil like substance

Answer: B



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8. The laboratory method of preparation of CO is

A.
$$HCOOH \stackrel{H_2SO_4}{\longrightarrow} H_2O + CO$$

B.
$$CO_2+C
ightarrow 2CO$$

$$\mathsf{C.}\, H_2CO_3 \stackrel{\mathrm{Heat}}{\longrightarrow} H_2O + CO + \frac{1}{2}O_2$$

D. $2C + O_2
ightarrow 2CO$

Answer: A



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9. When CO_2 is passed through sodium hydroxide, it forms

A. $NaHCO_3$

B. Na_2CO_3

C. both (a) and (b)

D. no reaction

Answer: C



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10. The correct statement about fullerenes is

A. It is an allotrope of carbon

B. It is thermodynamically stable form of

carbon

C. Fullereves are ionic in nature

D. It has an octahedral structure

Answer: A

