

CHEMISTRY

BOOKS - MCGROW HILL EDUCATION CHEMISTRY (HINGLISH)

METALS AND NON-METALS

Elementary Questions

1. Cinnabar is an ore of

A. Pb

- B. Zn
 - C. Hg
 - D. Cu

Answer: C



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- 2. A metal obtained by auto reduction or self reduction
 - A. Na
 - B. Zn

C. Fe

D. Cu

Answer: D



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3. Which of these is obtained by electrolytic reduction of tis compound?

A. Cu

B. Gold

C. Mg

D. Bi

Answer: C



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4. Which of them is not an ore of silver?

A. Ag_2S

B. $AgNO_3$

C. AgCl

D. None of them

Answer: D



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5. The metal refined-electolytically is

A. Zn

B. Na

C. Cu

D. Fe

Answer: C

6. The reaction used to join railway tracks involves reducing agent

A. Al

B. Mg

C. C

D. CO

Answer: A



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7. In the blast furnace/the flux is

A. acidic

B. basic

C. amphoteric

D. not matter

Answer: B



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8. Liquation is used to refine

A. iron

B. tin

C. copper

D. gold

Answer: B



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9. In the metallurgy of iron using blast furnace, the slag is

A. $FeSiO_3$

- B. $CaSiO_3$
- $\mathsf{C}.\ CaCO_3$
- D. $CaSO_3$

Answer: B



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- **10.** Zinc Blende is concentrated by
 - A. chemical separation
 - B. magnetic speciation

- C. forth floatation
- D. hydraulic Washing

Answer: C



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- 11. Which of the following alloys contains Tin?
 - A. brass
 - B. solder
 - C. duralumin

D. steel

Answer: B



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12. The iron obtained from blast furnace is

A. steel

B. cast iron

C. pig iron

D. wrought iron

Answer: C



13. An amalgam of metal has which other element?

A. C

B. Ag

C. Mg

D. Hg

Answer: D



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14. Gold as alloyed with which metal to make it harder?

A. Cu

B. Hg

C. Ag

D. C

Answer: A



15. Which of these metals cannot be obtained by reduction using C as reducing agent?

- A. copper
- B. zinc
- C. lead
- D. potassium

Answer: D



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- 16. The most abundant element in the universe is
 - A. helium
 - B. oxygen
 - C. silicon
 - D. hydrogen

Answer: B

17. The most abundant metal on the earth is

A. iron

B. gold

C. aluminium

D. copper

Answer: C



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18. Aluminum is extracted from
A. hematite
B. bauxite
C. calamine
D. magnetite
Answer: B
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19. Metallurgy is the process of

- A. extracting metals from the Ore
- B. roasting the Ore
- C. liquefaction of nitrongen
- D. adding carbon to the Ore in blast furnace

Answer: A



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20. A metal, which exists in liquid state

A. potassium

- B. sodium
- C. mercury
- D. gallium

Answer: C



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- 21. A metal, which melts on the palm
 - A. potassium
 - B. sodium

- C. gallium
- D. zinc

Answer: C



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22. A metal which is a poor conducton of heat

- A. lead
- B. gold
- C. zinc

D. iron

Answer: B



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23. The process of protecting iron by coating with Zinc.

A. smelting

B. galvanisation

C. rusting

D. corrosion

Answer: B



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24. The metalloids include the elements

A. boron, silicon

B. arsenic, antimony

C. germanium, tellurium

D. all the above

Answer: A

25. Metals generally form

A. basic oxides

B. acidic oxides

C. neutral oxides

D. none

Answer: A



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26. Which element is an important component of
transistors ?
A. sodium
B. copper
C. germanium
D. radium
Answer: C
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27. A lustrous non-metal is

A. d	iamond
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B. iodine

C. sulphur

D. phosphorus

Answer: B



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28. Alkali metals are

A. bad conductors of heat and electricity

- B. good conductors of heat and electricity
- C. good conductors of heat but bad conductors of electricity
- D. semi conductor of heat and electricity

Answer: B



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29. Metals are

A. malleable and ductile

- B. non-malleable and ductile
- C. brittle and ductile
- D. non-malleable and non-ductile

Answer: A



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- 30. Alkali metlas have
 - A. high melting and boiling point
 - B. low melting and boiling point

- C. high melting and low boiling point
- D. low melting and high boiling point

Answer: B



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31. Arrange the following metal in the increasing order of their reactivity towards water, Zinc, Iron, Magnesium, Sodium

- A. iron < magnesium < sodium < zinc
- B. iron < zinc < magnesium < sodium

C. magnesium < iron < sodium < zinc

D. sodium < iron < magnesium < zinc

Answer: B



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32. Sodium is a

A. silvery white and very soft metal

B. colourless and hard metal

C. silvery white and very hard metal

D. colourless and very soft metal

Answer: A



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33. Which of the following is a basic oxide?

A. CaO

B. CO_2

 $\mathsf{C}.\,H_2O$

D. N_2O

Answer: A



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34. Which of the following is a good conductor of electricity?

- A. charcoal
- B. coke
- C. graphite
- D. diamond

Answer: C



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35. Which of the following is used for making magnets?

- A. duralumin
- B. magnalium
- C. bronze
- D. alnico

Answer: D



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36. Iron burns in air to from

A. FeO

B. Fe_2O_3

 $\mathsf{C}.\,Fe_3O_4$

D. FeO_2

Answer: B

37. When a small piece of dry sodium is put in water, it reacts vigorously to produce

A. nitrogen gas

B. hydrogen gas

C. carbon dioxide gas

D. sulphur dioxide

Answer: B



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38. What should be added to pure iron to make stainlass steel?

A. nickel and cobalt

B. cadmium annd chromium

C. nickel and cadmium

D. chromium and nickel

Answer: D



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A. two	
B. one	
C. three	
D. four	
Answer: B	
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40. Essential component of an amalgam is

39. The valency of mercurous ion is

- A. an alkali metal
- B. mercury
- C. silver
- D. a non-metal

Answer: B



41. The red or Orange coating that forms on the surface of iron when exposed to air and moisture for some time is called

- A. galvanisation B. electroplating C. rust D. reduction **Answer: C**
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- **42.** The tip of the lead pencil is made of
 - A. lead

- B. graphite
- C. zinc
- D. charcoal

Answer: B



- 43. The most abundant element in the sun's atmosphere is
 - A. xenon
 - B. argon

- C. hydrogen
- D. oxygen

Answer: C



- **44.** White phosphorus is stored in
 - A. ether
 - B. water
 - C. alcohol kerosene

D. Oil

Answer: B



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45. Hydrogen gas is passed through oil in order to

- A. convert lower oil to higher oil
- B. convert liquid oil into solidified oil
- C. convert unsaturated hydrocarbon to

saturated hydrocarbon

D. all the above statements are wrong

Answer: C



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46. Ordinary glass is a mixture of

A. sodium silicate, Calcium silicate

B. sodium silicate, Calcium silicate and Silica

C. sodium silicate and Silica

D. none of the above

Answer: A



- **47.** Glass used for making wind screens of automobiles is
 - A. hard glass
 - B. photo chromatic glass
 - C. safety glass
 - D. optical galss

Answer: C



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48. Annealing is done to

A. increase brittleness

B. increase Transparency

C. decrease brittleness

D. increase refractive index

Answer: C



49. Sodium chloride is added to the solution after Saponification to cause the

A. hydrolysis of soap

B. precipitation of soap

C. sedimentation of soap

D. none of these

Answer: B



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50. Steel is preferred over iron in construction of ships because

A. melting point of steel is higher than Iron

B. steel is more uniform than Iron

C. steel does not rust

D. tensile strength of steel is not high

Answer: C



51. The automatic darkening of photo chromatic glass is because of the presence of

A. silver bromide

B. silver iodide

C. silicon dioxide

D. lead oxide

Answer: A



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52. Which of the following is not a man made polymer?

A. nylon

B. polyethen

C. teflon

D. wool

Answer: D



53. The monomer of Natural Rubber is

A.
$$CH_2= {\scriptsize C\atop CH_3} - CH= = CH_2$$

B.
$$CH_2=\stackrel{|}{=}C-CH==CH_2$$

$$\mathsf{C.}\,CH_2 = = CH - CH = = CH_2$$

D. none of these

Answer: A



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54. Polymer used in marking floor tiles is

A. teflon

B. polypropylene

C. polyvinyl Chloride

D. buta-1, 3-diene

Answer: C



55. Which of the following is an example of condensation Polymers ?

A. polyethene

B. neoprene

C. teflon

D. nylon

Answer: D



56. Insulation of electric wire is done by

A. poly isoprene

B. neoprene

C. poly vinyl Chloride

D. poly Buta - 1, 3 diene

Answer: C



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57. The carbon content in steel is

A.
$$0.1-5.0\,\%$$

B.
$$2.0-2.5\,\%$$

C.
$$0.1-1.5\,\%$$

D. less than 0.1

Answer: C



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58. Permanent magnets can be made from

A. Ni steel

- B. cobalt steel
- C. stainless steel
- D. wrought iron

Answer: D



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59. The hydrophilic end of synthetic detergent is

A.
$$CH_3(CH_3)_{10} - CH_2$$
 -

$$B.-CH_3$$

C. SO_3-Na^+

D. $-COO^-Na^+$

Answer: C



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60. Which of the following are biodegradable?

A. soaps

B. PVC

C. polyethene

D. teflon

Answer: A



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61. Non-metals from

A. ionic halides

B. covalent halides

C. coordinate halides

D. none of the above

Answer: B



- **62.** Hydrogen is not found free in the nature because hydrogen is a
 - A. reactive element
 - B. non-reactive element
 - C. electropositive elements
 - D. none of the above

Answer: A



- **63.** Hydrogen loses its electron to form H^+ , in this respect, it resembles
 - A. halogens
 - B. alkali metals
 - C. transition element
 - D. alkaline earth metals

Answer: B



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64. Water gas is a mixture of

A. CO and $N_{
m 2}$

B. CO_2 and H_2

C. CO and H_2

D. CO_2 and N_2

Answer: C

65. The formula of Oleum is

A.
$$H_2SO_4$$

$$\mathsf{B.}\,H_2S_2O_7$$

$$\mathsf{C}.\,H_2S_2O_3$$

D.
$$H_2S_2O_6$$

Answer: B



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66. The main constituents of cement are:

A. calcium oxide, silicon dioxide, Aluminium oxide

B. calcium oxide, Iron oxide, Sulphur dioxide

C. magnesium oxide, Silicon dioxide,

Aluminium oxide

D. none of these

Answer: A



67. Aqua regia is a mixture of

A. three parts of concentrated nitric acid and one part of concentrated hydrochloric acid

B. three parts of concentrated hydrochloric acid and one part concentrated nitric acid

C. three parts of dilute hydrochloric acid and

1 part of dilute nitric acid

D. three parts of dilute nitric acid and one part of dilute hydrochloric acid

Answer: B

68. The international standards of weight and measures are made of

A. gold silver alloys

B. platinum-iridium alloys

C. copper - gold alloys

D. platinum - iron alloys

Answer: B



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69. Gold metal is affected by

A. chlorine gas

B. oxygen gas

C. sulphur dioxide gas

D. helium gas

Answer: A



70. Hard glass is prepared by

A. fusing a mixture of sodium carbonate, calcium carbonate and silica

B. fusing a mixture of potassium carbonate, calcium carbonate and silica

C. fusing a mixture of potassium carbonate and any oxide

D. none of the above

Answer: B



71. Flint glass or optical glass contains

- A. lead oxide
- B. manganese dioxide
- C. lead dioxide
- D. cobalt chloride

Answer: A



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72. Which of the following is incorrect?

A. cobalt oxide imparts blue colour to glass

B. manganese dioxide imparts purple colour to glass

C. chromium oxide imparts red colour to glass

D. iron oxide imparts green colour to galss

Answer: C



73. The main raw materials required for the manufacture of portland cement are

- A. limestone and clay
- B. limestone and gypsum
- C. limestone and calcium chloride
- D. limestone and silica

Answer: A



74. Gypsum is added to cement because

A. it makes the cement very hard

B. it increases the pace of setting of cement

C. it slows down the initial setting of cement

when water is added

D. none of the above

Answer: C



75. A thick paste of cement, sand and water is called

A. concrete

B. mortar

C. slurry

D. moderator

Answer: B



76. A mixture of cement, gravel, coarse sand and water is called

A. mortar

B. concrete

C. slurry

D. hardner

Answer: B



77. RCC is

A. the concrete having an iron framework inside it as a support

B. the crushed cement in which more gravel is added

C. prepared by adding calcium chloride to the limestone and calcium silicate

D. none of the above

Answer: A



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78. The process of making soap by the hydrolysis of fats and oils with alkalis is called

A. hydrolysis

B. saponification

C. esterification

D. none of the above

Answer: B



79. The soap can be hardened by

A. adding sodium carbonate or sodium silicate during its manufacture

B. adding sodium chloride

C. adding potassium hydroxide

D. adding animal fat and coconut oil

Answer: A



80. Endoscope is made up of

- A. glass wool
- B. optical fibres
- C. optical glass
- D. lead crystal glass

Answer: B



81. The plastics which soften upon being heated but regains all its original properties on cooling are known as

- A. thermoplastics
- B. thermosetting plastics
- C. thermoelastic
- D. cellulose

Answer: A



82. Which	of the fo	ollowing is	not a	thermopla	astic
polymer ?					

- A. nylon
- B. PVC
- C. polythene
- D. bakelite

Answer: D



83. Match the following:

(A) Heat resistant glass

(B) Glass wool

(C) Laminated glass 3. Borosilicate glass (D) Photochromatic 4. Used in bullet proof

glas

 $\mathsf{B.} \begin{array}{cccc} A & B & C & D \\ 2 & 1 & 4 & 3 \end{array}$

D. $egin{array}{ccccc} A & B & C & D \ 3 & 2 & 1 & 4 \end{array}$

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1. Used as insulating material in oven 2. Useful as sun shield

screens

Answer: C

84. Limestone on heating gives

- A. washing soda
- B. plaster of Paris
- C. quicklime
- D. slaked lime

Answer: C



85. Bleaching powder is

- A. CaO_2Cl
- B. $CaOCl_2$
- C. $CaClO_2$
- D. $CaCl_2 + O_2$

Answer: B



86. Baking powder contains Sodium Hydrogen

Carbonate and

A. tartaric acid

B. sodium carbonate

C. calcium chloride

D. acetic acid

Answer: A



87.	Plaster	of Paris	is	obtained	by	heating
						- 0

- A. gypsum
- B. limestone
- C. sodium carbonate
- D. calcium sulphate

Answer: A



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88. The common name of sodium bicarbonate is

- A. lime
- B. baking powder
- C. baking soda
- D. washing soda

Answer: C



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89. Soda Acid for extinguisher contains

A. sodium carbonate and nitric acid

B. sodium hydrogen carbonate and sulphuric acid

C. sodium carbonate and carbonic acid

D. sodium chloride and sulphuric acid

Answer: B



90. Efflorescence is shown by

A. bleaching powder

- B. baking soda
- C. washing soda
- D. plaster of Paris

Answer: C



- 91. Slaked lime reacts with chlorine to give
 - A. baking soda
 - B. washing soda

C. bleaching powder

D. cment

Answer: C



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92. The main constituent of cement is

A. SiO_2

B. CaO

C. $CaSO_4$

D. Al_2O_3

Answer: A



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93. Sodium Carbonate is prepared on large scale by

- A. Solvay's process
- B. Beckmann's plants
- C. Hesenclover plant
- D. adding water to lime

Answer: A



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94. Name a compound which hardens on wetting with water.

- A. calcium sulphate decahydrate
- B. calcium sulphate hemihydrates
- C. calcium sulphate
- D. hydrated calcium sulphate

Answer: B



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95. The real bleaching agent present in bleaching powder is

A. chlorine

B. oxygen

C. CaO

D. none of the above

Answer: A



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96. Which of the following compounds is used as drying agent ?

- A. calcium oxide
- B. gypsum
- C. calcium chloride
- D. none of the above

Answer: A



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97. Cake does not taste bitter due to presence of

A. sodium carbonate

B. tartaric acid

C. citric acid

D. sugar

Answer: B

98. What is obtained on adding lime to H_2O ?

A. lime

B. limestone

C. slaked lime

D. quicklime

Answer: C



Higher Order Thinking Questions

1.	The	metal	present	in	haemogl	lobin	iis

A. sodium

B. magnesium

C. iron

D. aluminium

Answer: C



A. iron
B. aluminium
C. sodium
D. calcium
Answer: B
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3. Which of the following metal is most reactive?

2. The metal which form amphoteric oxide is

A. Sodium B. Potassium C. Magnesium D. Lead **Answer: B Watch Video Solution** 4. Which of the following metal shows variable valency? A. Lead

- B. Potassium
- C. Calcium
- D. Aluminium

Answer: A



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5. Iron reacts with dilute HCl to form

- A. $FeCl_2$
- B. $FeCl_3$

C. both (a) and (b)

D.
$$FeCl_3 + H_2$$

Answer: A



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6. The deficiency of vitamin B - 12 causes pernicious anaemia. The vitamin B - 12 is a complex of _____metal.

A. iron

B. chromium

- C. aluminium
- D. cobalt

Answer: D



- 7. The incorrect statement about phosphorus is
 - A. Phosphorus is stored in water
 - B. Phosphorus is soluble in carbon disulphide

C. Phosphorus reacts with oxygen to form acidic oxides

D. Phosphorus oxides are gases

Answer: D

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8. The most reactive metal is present in block of the periodic table.

 $\mathsf{A.}\;s$ -

B.p-

 $\mathsf{C}.d$ -

D. f -

Answer: A



9. Sodium hydroxide cannot be stored in aluminium container as aluminium reacts with sodium hydroxide to form

A. sodium hexa aluminate

B. sodium octa aluminate

C. sodium meta aluminate

D. sodium aluminate

Answer: D



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10. Which of the following metal oxide contains metal in two different valencies ?

A. Al_2O_3

 $\operatorname{B.} Fe_3O_4$

C. MnO_2

D. PbO_2

Answer: B

