



CHEMISTRY

BOOKS - S DINESH & CO CHEMISTRY (HINGLISH)

ALKALI EARTH METALS

Multiple Choice Questions

1. In alkaline earth metals, the electrons are more

firmly held to the nucleus and hence

A. atoms of alkaline earth metals are bigger

than alkali metals

B. ionziations energy of alkaline earths is

greater than alkali metals

C. reactivity of alkaline earths is greater than

alkali metals

D. alkaline earths are less abundant in nature.

Answer: B

Watch Video Solution

2. Which of the following statements is correct?

A. Alkali metals are less electropositive than

alkaline earth metals

B. The alkaline earth metals are denser and

harder than alkali metals

C. The alkali metals are denser and harder than

alkaline earth metals

D. The first ionziation potential of alkali metals

is more than that of alkaline earth metals

Answer: B



3. The elements of group-2 are called alkaline earth

metals because

A. they are alkaline in nature

B. they occur in earth's crust and form alkaline

salts

C. their oxides are alkaline and occur in earth's

crust

D. these are s-block elements



- 4. Group 2 elements are
 - A. oxidising agents
 - B. reducing agents
 - C. oxidising as well as reducing agents
 - D. none of these

Answer: B

5. Group 2 elements belong to

A. f-block

B. d-block

C. s-block

D. p-block

Answer: C

Watch Video Solution

6. which of the following configurations is correct

for alkaline earth elements?

A. $1s^22s^22p^6$

 $\mathsf{B}.\, 1s^2 2s^2 2p^6 3s^2 2p^2$

C. $1s^2 2s^2 2p^6 3s^2$

D. $1s^2 2s^2 2p^3$

Answer: C



7. The most abundant alkaline earth metal (in earth's crust) is

A. Radium

B. Calcium

C. Magnesium

D. Strontium

Answer: B



8. The valence shell configuration fo alkaline earth metals is represented by ns^2 where n varies from

A. 2 to 6

B. 2 to 7

C.1to6

D.1to7

Answer: B



9. One of the following statements is incorrect

A. Element of group 2 are good conductors of electricity and heat B. Compounds of group 2 elements are diamagnetic in nature C. The salts of group 2 elements are more heavily hydrated than those of elements of group 1

D. Elements of group 2 are more electropositive than group 1 elements.



10. Alkaline earth metals from dipositive ions instead of unipositive ions because

- A. Dipositive ions carry more charge
- B. Their second ionisation energies are not

different from first ionisation energy

C. Unipositive ions do not have stable

configuration

D. Dipositive ion have more hydration energy.

Answer: D

Watch Video Solution

11. Compounds of alkaline earth metals are less soluble in water than the corresponding alkali metal salts due to :

A. their high ionisation energy

B. their high lattice energy

C. their less basic character

D. their low electronegative values.

Answer: B

Watch Video Solution

12. $MgBr_2$ and MgI_2 are soluble in acetone because of

A. their ionic nature

B. their coordinate nature

C. their metallic nature

D. their covalent nature





13. In case of alkaline earth metals. The oxidation state of more than two is not observed because

A. they have only two electrons in the

outermost shell

B. the s-orbital can accommodate only two electrons

C. the removal of third electron involves
breaking up of noble gas configuration and
the energy needed for this purpose is
extermely high
D. none of these

Answer: C

Watch Video Solution

14. On moving down the group, the reducing power of alkaline earth metals.

A. decreases

B. increases

C. remain unchanged

D. increases and then decreases

Answer: B

View Text Solution

15. The order of increasing lattice energy of the metallic compound is

A. NaClltCaOltNalltBaO

B. NalltNaClltBaOltCaO

C. NaClltNalltBaOltCaO

D. NalltNaClltCaOltBaO

Answer: B

Watch Video Solution

16. Which of the following is not the characteristic of Ba?

A. It emits electrons on exposure to light

B. It is a silvery white metal

C. It forms $Ba(NO_3)_2$ which is used in

preparation of green fire

D. Its ionization potential is lower than radium

Answer: A

Watch Video Solution

17. A substance which gives a brick red flame and breaks down on heating to give oxygen and a brown gas is

A. Magnesium nitrate

B. Calcium carbonate

C. calcium nitrate

D. Magnesium carbonate

Answer: C

Watch Video Solution

18. Which salt gives crimson colour in flame?

A. $SrCl_2$

 $\mathsf{B.}\, CaCl_2$

C. NaCl

$\mathsf{D}.\,MgCl_2$

Answer: A

Watch Video Solution

19. A fire work gave green light. It probably contained a salt of

A. Ca

B. Sr

C. Ba

D. Mg.



20. Which of the following has exceptionally high boiling point?

A. MgO

B. NaHO

C. NaCl

D. KCl.

Answer: A



21. Ca^{2+} ion is isoelectoronic with

A. Na

B. Ar

C. Mg^{2+}

D. Sr^{2+}

Answer: B



22. If Na^+ ion is larger than Mg^{2+} and S^{2-} ion is

least soluble in water

A. Sodium chloride

B. sodium sulphide

C. Magnesium chloride

D. Magnesium sulphide

Answer: D



23. The least abundant alkaline earth metal is

A. Barium

B. Radium

C. Strontium

D. Beryllium

Answer: B

Watch Video Solution

24. Which of the following is least reactive?

A. Calcium

B. Strontium

C. Barium

D. Radium

Answer: A



25. Which of the following metallic chloride has covalent character?

A. Beryllium chloride

B. sodium chloride

C. Magnesium chloride

D. Barium chloride

Answer: A



26. The atomic size of elements of group 2 compared to group 1 element are

A. equal

B. higher

C. smaller

D. none of these



27. Select one of the following sets in which there are three members of group 2

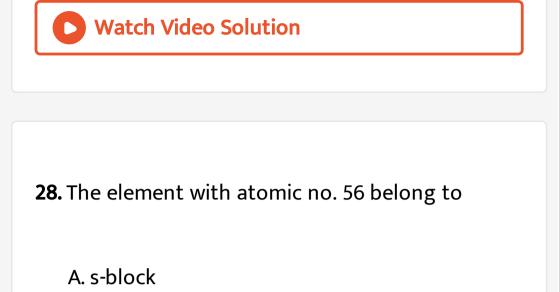
A. Aluminium, sodium, potassium

B. Lithium, sodium, potassium

C. Magnesium, barium, calcium

D. Rubidium, cesium, francium

Answer: C



- B. p-block
- C. d-block
- D. f-block

Answer: A



29. Which of the following has the highest first

ionization energy?

A. Ba

B. Mg

C. Ca

D. Be.

Answer: D



30. The density of Ca is less than that of Mg because

A. Nuclear charge of Ca is more than Mg

B. Vacant 3d orbital is present in Ca

C. Size of Ca is less than Mg

D. none of these

Answer: B

Watch Video Solution

31. The most electronegative alkaline earth metal is

A. Be

B. Mg

C. Ca

D. Ra.

Answer: A



32. The hydration energy of Mg^{+2} is greater than

that of

A. Al^{3+}

B. Na^+

 $\mathsf{C.}\,Be^{2\,+}$

D. Li^+

Answer: B



33. Which of the following is not an ore of magnesium?

A. Carnallite

B. Magnesite

C. Dolomite

D. Gypsum

Answer: D

Vatch Video Solution

34. Important ore of magnesium is

A. Dolomite

B. Sylvine

C. Amblygonite

D. Triphyllite

Answer: A



35. Pure anhydrous $MgCl_2$ can be prepared from the hydrated salt by

A. heating the hydrate to red heat in the

atmosphere of HCl gas

B. melting the hydrate

C. heating the hydrate with coke

D. heating the hydrate with Mg ribbon.

Answer: A

Watch Video Solution

36. Metallic magnesium is prepared by

A. Reduction of MgO by coke

B. Electrolysis of aqueous solution of

 $Mg(NO_3)_2$

C. Displacement of Mg by iron from $MgSO_4$

solution

D. Electrolysis of molten $MgCl_2$

Answer: D

Watch Video Solution

37. Magnesium powder burns in air to give :

A. MgO

 $\mathsf{B.}\,Mg_3N_2$

 $C. MgCO_3$

D. MgO and Mg_3N_2 both

Answer: D

Watch Video Solution

38. Epsom salt is

A. Magnesium sulphate

B. Calcium sulphate

C. Ferrous ammonium sulphate

D. Magnesium ammonium phosphate

Answer: A

Watch Video Solution

39. Anhydrone, a drying agent is

A. $Mg(OH_2).6H_2O$

 $\mathsf{B.}\,MgSO_{4.7}H_2O$

 $\mathsf{C.}\, Mg(OH).7H_2O$

D. $Mg(ClO_4)_2$

Answer: D

Watch Video Solution

40. Which of the following metal is used in the preparation of Grignard's reagent?

A. Ca

B. Mg

C. Cd

D. Both Mg.Cd.



41. The sulphate of which metals given below has highest solubility in water

A. Ca

B.Ba

C. Sr

D. Mg.

Answer: D



42. Dow metal contains

A. Mg,Al

B. Al,Mg,Zn

C. Mg,Cu,Zn

D. Mg,Cu

Answer: B

Watch Video Solution

43. Which of the following metals is present chlorophyll?

A. Mg

B.Be

C. Ca

D. none of these

Answer: A



44. Which of the following is used as an antacid?

A. MgO

 $\mathsf{B.}\, Mg(OH)_2$

 $\mathsf{C}.MgSO_4$

D. $MgCO_3$

Answer: B

Watch Video Solution

45. Which of the following represent magnesite ore?

A. $CaCO_3$. $MgCO_3$

 $\mathsf{B.}\,MgSO_{4.7}H_2O$

C. KCl. $MgCl_{2.6}H_2O$

D. $MgCO_3$

Answer: D

Watch Video Solution

46. A certain metal M is used to prepare an antiacid, which is used as a medicine in acidity. This metal accidently catches fire and it was found that the fire cannot be put out by using Co_2 based extinguishers. The metal M is

A. Ca

B.C

C. Mg

D. None

Answer: C

Watch Video Solution

47. Magnesium wire burns in the atomosphere of

 CO_2 because

A. Magnesium acts as an oxidising agent

B. Magnesium has 2 electrons in the outermost

orbit

C. Magnesium acts as a reducing agent and

removes oxygen from CO_2

D. Mg forms complex with CO_2

Answer: C

> Watch Video Solution

48. A certain metal is present in the soil, plants, bones, egg shelts, sea shells and coral. It is also

used to remove oxygen from molten steel and its

hydroxide is used to detect Co_2 . The metal is

A. Mg

B. Al

C. Ca

D. Na

Answer: C



49. Nitrolim is

A. $Ca_3(PO_4)_2$

B. $CaCN_2 + C$

 $\operatorname{C.} Ca(CN)_2$

D. $Ca(NO_3)_2$

Answer: B



50. Formula of gypsum salt is

A. $MgSO_{4.2}H_2O$

 $\mathsf{B.}\, CaSO_{4.2}H_2O$

 $C. 2CaSO_4$

D. $CaSO_{4.3}H_2O$

Answer: B



51. Calcium is obtained by

A. Electrolysis of molten $CaCl_2$

B. Electrolysis of a solution of $CaCl_2$ in water

C. Reduction of $CaCl_2$ with carbon

D. Roasting of lime stone.



52. The metal that is extracted from sea water is

A. Fe

B. Ca

C. Mg

D. Au

Answer: C



53. At high temperature, nitrogen combines with CaC_2 to give :

A. Calcium cyanide

B. Calcium cyanamide

C. Calcium carbonate

D. Calcium nitrate

Answer: B

Watch Video Solution

54. Slacked lime is used in the manufacture of

A. Cement

B. Fire bricks

C. Pigments

D. Medicines

Answer: A

View Text Solution

55. The element which is not present in asbestos, is

A. Ca

B. Ba

C. Mg

D. Si

Answer: B



56. Calcium does not combine directly with

A. Oxygen

B. Nitrogen

C. Hydrogen

D. Carbon

Answer: B



57. Which of the following is used as a scavenger in

metallurgy?

A. Na

B.K

C. Ca

D. Zn

Answer: C

View Text Solution

58. which of the following is not a use of Epsom salt?

A. As a purgative

B. As a mordant in dyeing

C. As a stimulant to increase the secretion of

bile

D. For removal of sulphur from petroleum

Answer: D

View Text Solution

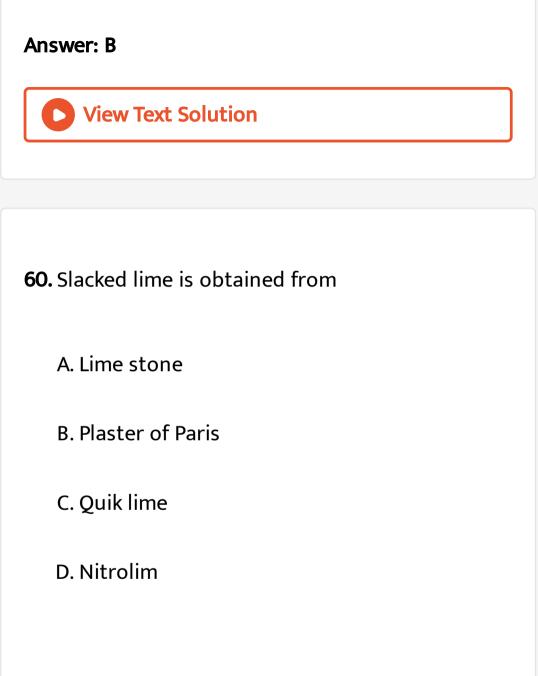
59. What is X in the equation?

A. $CaCO_3$

B. CaC2

 $\mathsf{C}.CO_2$

D. none of these



Answer: C



61. The milk of lime is

A. Suspension of $CaCO_3$ in water

B. Suspension of $Ca(OH)_2$ in water

C. supension of sand in water

D. suspension of $CaSO_4$ in water.

Answer: B

Watch Video Solution

62. The composition of electrolyte for the manufacture of calcium by electrolytic method is

A. $CaCO_3 + CaCl_2$

 $\mathsf{B.}\, CaCl_2+CaF_2$

 $\mathsf{C.}\, CaSO_4 + CaCl_2$

 $\mathsf{D.}\, CaCl_2 + KCl$

Answer: B



63. Which of the following hydroxides is the weakest base?

A. LiOH

 $\operatorname{B.} Ca(OH)_2$

C. KOH

 $\mathsf{D.}\,Sr(OH)_2$

Answer: A



64. Which of the following hydroxides is the strongest base?

A. $B(OH)_2$

- $\mathsf{B.}\, Mg(OH)_2$
- $\operatorname{C.} Ca(OH)_2$
- $\mathsf{D.}\,Ba(OH)_2$

Answer: D



65. Which of the following is the weakest base?

A. $Mg(OH)_2$

 $\mathsf{B.}\, Ca(OH)_2$

C. NaOH

D. KOH

Answer: A



66. A suspension of slaked lime in water is called

A. Lime water

B. Milk of magnesia

C. Milk of lime

D. None

Answer: C



67. Which of the following statements is true about

 $Ca(OH)_2$?

A. It is not used in the preparation of bleaching

powder

B. It is a light blue solid

C. It is used in chromatography

D. Its solution in water is called lime water

Answer: D

Watch Video Solution

68. Which of the following metal dissolves in sodium hydroxide with the evolution of hydrogen?

A. Calcium

B. Magnesium

C. Beryllium

D. Strontium

Answer: C



69. Which of the following alkaline earth metal hydroxide is amphoteric in nature?

A. $Be(OH)_2$

$\mathsf{B.}\, Ca(OH)_2$

$\operatorname{C.}Sr(OH)_2$

 $D. Ba(OH)_2$

Answer: A

Watch Video Solution

70. Which out of the following will have the large value of solubility product/most soluble in water?

A. $Be(OH)_2$

 $\mathsf{B.}\, Ca(OH)_2$

 $\mathsf{C}.\operatorname{Ba}(OH)_2$

 $\mathsf{D}.\, Mg(OH)_2$

Answer: C



71. Which out of the following represents Baryta?

A. $BaSO_4$

B. BaO

 $\mathsf{C}. Ba(OH)_2$

D. $BaCO_3$





72. In the reaction

 $Mg+H_2O
ightarrow X+H_2$,X is

A. MgO

 $\mathsf{B.}\, Mg(OH)_2$

 $\mathsf{C}.\,MgH_2$

D. none of these

Answer: A



73. Superoxide of type MO_2 are formed by all except

A. Potassium

B. Beryllium

C. Strontium

D. Barium

Answer: B



74. An amphoteric oxide dissolves in HCl to form a salt. The salt does not impart any colour to the flame and fumes in moist air. The oxide is

A. $BaSO_2$

B. MgO

C. BeO

D. CaO

Answer: C

Watch Video Solution

75. Which of the following alkaline earth metal

oxide is most basic?

A. BeO

B. MgO

C. CaO

D. BaO

Answer: C



76. Which out of the following oxides will react

both with acids and bases?

A. BeO

B. MgO

C. CaO

D. BaO

Answer: A



77. which among the following does not at all show

the tendency to form peroxides?

A. Lithium

B. Magnesium

C. Beryllium

D. Barium

Answer: A

O Watch Video Solution

78. Which out of the following is extensively used as a refractory and in domestic heating appliances?

A. BaO

B. CaO

C. MgO

D. Na_2O

Answer: C



79. Arrange the following in increasing order of basic strength :

 $MgO, SrO, K_2O, NiO, Cs_2O$

A. $MgO > SrO > K_2O > NiO > Cs_2O$

B. $Cs_2O < K_2O < MgO < SrO < NiO$

C. $NiO < MgO < SrO < K_2O < Cs_2O$

D. $K_2O < NiO < MgO < SrO < Cs_2O$

Answer: C

> Watch Video Solution

80. Which out of the following metal oxides is the

most acidic?

A. CaO

B. MgO

 $\mathsf{C.}\,Al_2O_3$

D. Na_2O

Answer: C



81. The nature of the oxide of radium is

A. Acidic

B. Basic

C. Neutral

D. Amphoteric

Answer: B



82. The carbonate that is least soluble in water

A. $BeCO_3$

B. $MgCO_3$

 $C. CaCO_3$

D. $BaCO_3$

Answer: D



83. Which out of the following does not exist in the

solid state?

A. $NaHCO_3$

B. $CaCO_3$

 $\mathsf{C.} Ca(HCO_3)_2$

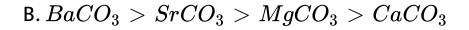
D. $BaCO_3$

Answer: C

Watch Video Solution

84. The thermal stability of alkaline earth metal carbonates $MgCO_3$, $CaCO_3$, $BaCO_3$ and $SrCO_3$ decreases as:

A. $BaCO_3 > SrCO_3 > CaCO_3 > MgCO_3$



$\mathsf{C.}\, CaCO_3 > SrCO_3 > MgCO_3 > BaCO_3$

D. $MgCO_3 > CaCO_3 > SrCO_3 > BaCO_3$

Answer: A

Watch Video Solution

85. Which of the following carbonates will not

decompose on heating?

A. $CaCO_3$

B. Na_2CO_3

 $C. BaCO_3$

D. Li_2CO_3

Answer: B



86. (iii) Which is not a basic flux?

A. $CaCO_3$

B. MgO

C. CaO

D. SiO_2



87. Which of the following alkaline earth metal carbonate is thermally least stable?

A. $BaCO_3$

B. $MgCO_3$

C. $CaCO_3$

D. $BeCO_3$

Answer: D



88. One among the following carbonate is soluble

in water

- A. $SrCO_3$
- B. $BaCO_3$
- $\mathsf{C.}\,Al_2(CO_3)_3$
- D. Rb_2CO_3

Answer: D



89. Which of the following can dissolves limestrone?

A. $CO_2 + H_2O$

 $\mathsf{B.} NaOH + H_2O$

 $\mathsf{C.}\,NH_3+H_2O$

D. none of these

Answer: A

Watch Video Solution

90. Mortar ios a mixture of slaked lime and sand in

the ratio

A. 0.1256944444444

B. 0.04375

C. 0.085416666666667

D. 0.04444444444444

Answer: B

View Text Solution

91. Concrete is a mixture of

A. cement, sand, gravel and water

B. cement, lime and water

C. Cement,sand and water

D. None

Answer: A



92. By adding gypsum to cement

A. Decrease the rate of setting of cement

B. Bind the particles of calcium silicate

C. Facilitate the formation of colloidal gel

D. All the above

Answer: A

Watch Video Solution

93. The function of sand in mortar is :

A. to decrease the hardness

B. to prevent excessive shrinkage because of

which cracks may result

C. to increase hardness

D. to make the mass compact

Answer: B

D View Text Solution

94. Setting of cement is an

A. Exothermic reaction

B. Endothermic reaction

C. Neither exothermic nor endothermic

D. None

Answer: A



95. Setting of plaster of Paris involves

A. Oxidation with atmospheric oxygen

B. Combination with atmosphere CO_2

C. Dehydrartion

D. Hydration to yield another hydrate



96. The minimum equivalent conductance in fused state is shown by-

A. $MgCl_2$

B. $BeCl_2$

 $C. CaCl_2$

D. $SrCl_2$

Answer: B



97. Ground water is hard in the region of

A. Coal depositss

B. Petroleum deposits

C. Limestone deposits

D. none of the above

Answer: C

Watch Video Solution

98. Which of the following does not react with

water?

A. BeO

B. CaO

C. MgO

D. SrO

Answer: A



99. The behavior of Be salt in pure water is

A. Basic

B. Acidic

C. Amphoteric

D. Sometimes basic and sometimes acidic

depending upon its concentration.

Answer: C

View Text Solution

100. Peroxide and super oxides of alkali metal are

coloured because of

- A. Defects in crystals
- B. Presence of unpaired electrons
- C. Partially due to the defects and partially due

to presence of unpaired electrons

D. none of the above

Answer: CA



101. A solid compound 'X' on heating gives CO_2 gas and a residue. The residue mixed with water

form 'Y'. On passing an excess of CO_2 through 'Y' in the water, a clear solution 'Z' is obtained. On boiling 'Z' compound 'X' is reformed. The compound 'X' is :

A. $CaCO_3$

 $\mathsf{B.}\,Ca(HCO_3)_2$

 $\mathsf{C.}\,Na_2CO_3$

D. $NaHCO_3$

Answer: B

Watch Video Solution

102. A compound of calcium (X) is used i9n sugar industry for the purification of sugar. When exposed to an oxy-hydrogen flame, it becomes incandascent and starts emitting white light. On treatment with CO_2 it forms a compound, which can be decomposed to give back X at very high temperature. X is

A. $CaCO_3$

B. CaO

 $C.Ca(OH)_2$

D. $CaSO_4$



103. The hydride from amongest the following that cannot be obtained directly by reaction with hydrogen is

A. CaH_2

B. MgH_2

 $\mathsf{C}. BeH_2$

D. NaH



104. Hydrolith when dissolved in water liberates hydrogen. The formula of hydrolith is

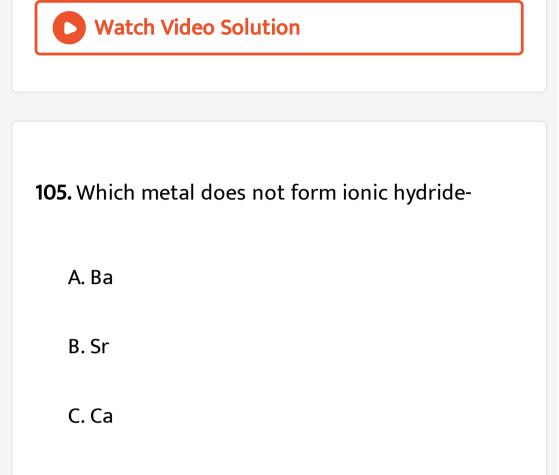
A. NaH

B. CH_4

 $C. C_2 H_6$

D. CaH_2

Answer: D



D. Be.

Answer: D



106. The solubilities of sulphates fo alkaline earth metals decreases from Be to Ba because

A. Their lattice energies decrease in this order

B. their lattice energies increase in this order

C. lattice energies are about the same

D. hydration energies of Be^{2+} to Ba^{2+} cations

decrease in this order

Answer: D

Watch Video Solution

107. Alkaline earth sulphate that is least soluble in

water

A. $MgSO_4$

B. $CaSO_4$

 $\mathsf{C}.BaSO_4$

D. $SrSO_4$

Answer: C



108. A white salt gives a white precipitate with barium chloride solution which is insoluble in ammonia and hot water. The salt is

A. Silver nitrate

B. Magnesium sulphate

C. Lead Acetate

D. Potassium chromate

Answer: B



109. which out of the following will have largest value of K_{sp} ?

A. $BeSO_4$

B. $MgSO_4$

 $C.CaSO_4$

D. $BaSO_4$

Answer: A



110. Which of the following alkaline earth metal ions has the highest ionic mobility in aqueous solution?

A. Be^{2+}

B. Mg^{2+}

C. Ca^{2+}

D. Ba^{2+}

Answer: D



111. When hydrated $MgCI_2.6H_2O$ is strongly

heated,

A. MgO is formed

B. $Mg(OH)_2$ is formed

C. Mg(OH)Cl is formed

D. Anhydrous $MgCl_2$ is formed

Answer: B



112. Calcium carbide is obtained by heating

- A. Calcium carbonate
- B. A mixture of quick lime and coke
- C. A mixture of slaked lime and coke
- D. none of the above

Answer: B



113. An oxalate of alkaline earth metal is insoluble in bases but soluble in dilute strong acid. It is also a component of most kidney stones. It is A. $MgC_2O_{4.2}H_2O$

 $\mathsf{B.}\, CaC_2O_{4.2}H_2O$

C. $BaCr_2O_4$

D. none

Answer: B

Watch Video Solution

114. When calcium carbide reacts with N_2 at $1000^{\circ}C$, the compound formed is

A. $CaCN_2$

 $\mathsf{B.}\, Ca(CN)_2$

 $\mathsf{C.}\,Ca_3N_2$

 $\mathsf{D}. \operatorname{Ca}(NO_3)_2$

Answer: A

> Watch Video Solution

115. Calcium metal is used to produce high vaccum

because it

A. can remove water

B. can remove both O_2 and N_2

C. is a good reductant

D. is highly electropositive

Answer: B

Watch Video Solution

116. calcium cyanamide on treatment with steam under pressure gives ammonia and

A. CaO

 $\mathsf{B.}\,Ca(HCO_3)_2$

 $C. CaCO_3$

$\operatorname{D.} Ca(OH)_2$

Answer: C

Watch Video Solution

117. Which out of the following statements is not correct for anhydrous calcium chloride ?

A. It is prepared by heating hydrated calcium

chloride above 533K

B. It is used for drying alcohol and NH_3

C. It is used as a dehydrating agent to control

snow and ice on highway and pavements

D. When mixed in concrete, it gives quicker

initial setting and improves its strength

Answer: B

Watch Video Solution

118. Both Be and Al become passive on reaction with conc. nitric acid due to-

A. the non reactive nature of the metal

B. the non reactive nature of the acid

C. the formation of an inert layer of oxide on

the surface of the metals

D. none of these

Answer: B

Watch Video Solution

119. Which of the following statements about Be is

not correct?

A. Be has a high charge/size ratio

B. Be shows diagonal relationship with Al

C. Be forms $BeSO_4$ which is soluble in water

D. Be is unstable in air.

Answer: B

Watch Video Solution

120. BeF_2 is soluble in water whereas the fluorides of other alkaline earth metals are insoluble because of

A. ionic nature of BeF_2

B. greater hydration energy of Be^{2+} ion as

compared to crystal lattice

C. covalent nature of BeF_2

D. none of these

Answer: B

Watch Video Solution

121. Which of the following is a covalent oxide?

A. CaO

B. SrO

C. MgO

D. BeO

Answer: D



122. Pick up the wrong statement

A. Be like Al does not dissolve in alkalies

B. Oxides of both Be and Al are amphoteric

C. Beryllium chloride like Aluminium chloride is

covalent

D. Burning of limestone containing more than

10% aluminium silicates give hydraulic mortar.

Answer: A

Watch Video Solution

123. $BeSO_4$ is soluble in water but $BaSO_4$ is insoluble because

A. $BeSO_4$ is ionic while $BaSO_4$ is covalent

amorphous

C. $BeSO_4$ has smaller lattice energy and high

heat of hydration as compared to $BaSO_4$

D. $BeSO_4$ is ionic while $BaSO_4$ is covalent

Answer: C

Watch Video Solution

124. In the reaction

 $Be+2NaOH
ightarrow X+H_2O$, X is

A. $Be(OH)_2$

B. Na_2BeO_2

C. BeO

D. None of these

Answer: B



125. An allylide on hydrolysis gives C_3H_4 (allylene).The alkaline earth metal cation of allylide dissolves in dry ether in presence of alkyl halide to form Grignard's reagent. The allylide is A. $MgBr_2$

B. Ca_2C_3

 $\mathsf{C}.\,Mg_2C_3$

D. Ba_2Ca_3

Answer: C



126. The most efficient method of extraction of beryllium is

magnesium

B. reduction of beryllium oxide with carbon

C. electolysis of fused beryllium chloride

D. dissociation of beryllium carbide

Answer: C

Watch Video Solution

127. Which of the following carbide can be used to

prepare methane by its action with water?

A. CaC_2

B. Be_2C

 $\mathsf{C}.MgC_2$

D. None

Answer: B

Watch Video Solution

128. Which element of group 2 is used in treatment

of cancer?

A. Magnesium

B. Radium

C. Strontium

D. Beryllium

Answer: B

> Watch Video Solution

129. Which of the following is used for taking the

X - ray spectra of the digestive system:

A. $CaSO_4$

 $\mathsf{B.}\,BaSO_4$

 $\mathsf{C}.\,MgSO_4$

D. $BaCO_3$

Answer: B



130. Flash bulbs contain a foil of magnesium packed in the atmosphere of

A. Nitrogen

B. Air

C. Halogens

D. SO_2

Answer: A

Watch Video Solution

131. Magnesium wire continues to burn in the atmosphere of CO_2 though $C)_2$ is not a supproter fo combusion because

A. Mg acts as an oxidising agent

B. Mtg has high ionization energy

C. Mg acts as a reducing agent and removes

oxygen from CO_2

D. All of the above

Answer: C

Watch Video Solution

132. The mixture of $MgCl_2$ and MgO , called as

Sorrel cement, is used in

A. Match industry

B. making houses

C. dental filling

D. portland cement

Answer: C

Watch Video Solution

133. Which of the following metals is present chlorophyll?

A. Magnesium

B. Iron

C. Sodium

D. Beryllium

Answer: A



134. A piece of magnesium ribbon was heated to redness in an atmosphere of nitrogen and then cooled with water. The gas evolved is

A. Hydrogen

B. Oxygen

C. Nitrogen

D. Ammonia

Answer: D

Watch Video Solution

135. Which out of the following drying agents will react with CO_2 and remove water vapours?

A. $CaCl_2$

B. $CaCO_3$

C. CaO

D. H_2SO_4



136. The alloy Electron used in the construction of air crafts has the composition

A. 15% Mg, 85% Al

B. 95% Mg, 5% Zn

C. 95% Mg, 5% Al

D. 80%Mg, 20% Zn



137. Which of the following is used as barium metal for getting the X-ray spectrum of the human digestive system?

A. BaO

B. $BaSO_4$

C. $BaCO_3$

D. BaS





138. Bone ash contains

A. CaO

- B. $Ca_{3}(PO_{4})_{2}$
- $C. CaSO_4$
- D. $Ca(H_2PO_4)_2$



139. The plaster of paris is hardened by

A. liberating CO_2

B. changing into $CaCO_3$

C. uniting with CaO

D. uniting with water

Answer: D



140. Which of the following on thermal decomposition yields a basic as well as acidic oxide?

A. $KClO_3$

B. $CaCO_3$

 $C. NaNO_3$

D. NH_4NO_3

Answer: B

Watch Video Solution

141. Which out of the following is called 'Blue John'

A. CaH_2

?

B. CaF_2

 $\mathsf{C.}\, Ca_3P_2$

D. CaO



142. calcium cyanamide on treatment with steam

under pressure gives ammonia and

A. Calcium carbonate

B. Calcium hydroxide

C. Calcium oxide

D. Calcium bicarbonate

Answer: A

Watch Video Solution

143. Which of the following is insoluble in acetic acid?

A. Calcium oxide

B. Calcium carbonate

C. Calcium oxalate

D. Calcium hydroxide

Answer: D

Watch Video Solution

144. The approximate percentage of gypsum in Portland cement is

A. 10-15%

B. 20-30%

C. 30-40%

D. 2-3%

Answer: D



145. Which of the following exists as polymeric

chain in the solid state?

A. $SrCl_2$

B. $BaCl_2$

 $\mathsf{C}. MgCl_2$

D. $BeCl_2$

Answer: D



146. Ca^{2+} is isoelectronic with

A.
$$Mg^{2\,+}$$

B.Kr

C. Ar

D. Na^+

Answer: C



147. which of the following elements has the highest value of second ionization energy?

A. Lithium

B. Beryllium

C. Boron

D. Magnesium

Answer: A



148. The use of $BaSO_4$ in taking X-ray pictures of

digestive tract is based on

A. Insolubility in water

B. great scattering of X-rays by Ba^{2+} ions

C. Both of these

D. None of these

Answer: C

Watch Video Solution

149. Alkaline earth metals dissolve in liquid NH_3 ,

the colour of the solution obtained is

A. Blue

B. reduction of beryllium oxide with carbon

C. purple

D. Pink

Answer: A

Watch Video Solution

Revision Questions From Competitive Exams

1. Setting of cement is an

A. Exothermic reaction

B. Endothermic reaction

C. Neither exothermic nor endothermic

D. None

Answer: A



2. Setting of plaster of paris is

A. Oxidation with atmospheric oxygen

B. Combination with atmosphere CO_2

C. Dehydrartion

D. Hydration to yield another hydrate

Answer: D

Watch Video Solution

3. The formula of calcium cyanamide is

A. $Ca(CN)_2$

 $\mathsf{B.}\, CaC_2N$

C. CaNCN

 $\mathsf{D.}\, CaCHNH_2$

Answer: C



4. calcium cyanamide on treatment with steam under pressure gives ammonia and

A. Calcium carbonate

B. Calcium hydroxide

C. Calcium oxide

D. Calcium bicarbonate

Answer: A

Watch Video Solution

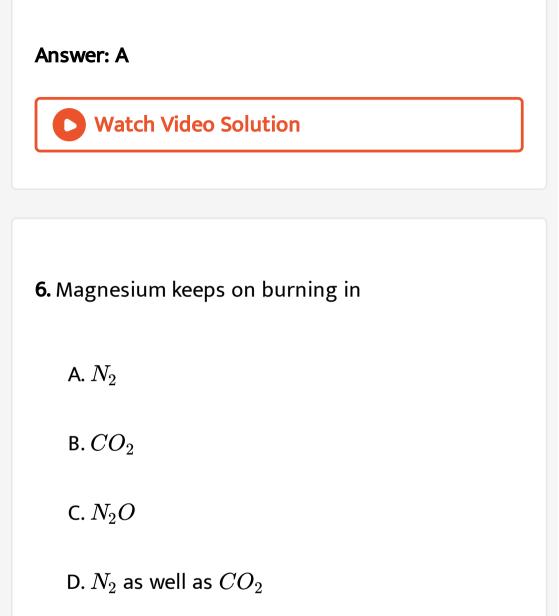
5. Nitrolim is

A. $CaCN_2+C$

 $\mathsf{B.} \operatorname{Ca}(\operatorname{CN})_2 + C$

 $C. CaC_2 + C$

D. All



Answer: D



7. Of the following the commonly used as a laboratory desiccator is

A. Anhyd. Na_2CO_3

B. Anhyd. $CaCl_2$

C. Dry NaCl

D. none of the above

Answer: B

Watch Video Solution

8. Portland cement is manufactured by using-

A. Limestone, clay and sand

B. Limestone, gypsum and sand

C. Limestone, gypsum and alumina

D. Limestone, clay and gypsum

Answer: D

Watch Video Solution

9. Drying agent which reacts with CO_2 and involves water vapour is

A. CaO

B. $CaCl_2$

 $C. CaCO_3$

D. $Ca(NO_3)_2$

Answer: AC

Watch Video Solution

10. Metal which is used in Flash Bulbs?

A. Mg

B.Ba

C. Cu

D. Ag.

Answer: C



11. Plaster of paris is

A. $Ca_2SiO_{4.1}\,/\,2H_2O$

B. $Ca_{2}SiO_{4.1}/22H_{2}O$

 $\mathsf{C.}\,Ca_2SO_{4.1}\,/\,2H_2O$

D. $CaCO_{4.2}H_2O$





12. Dolomite is:-

A. KCl.Mg $Cl_{2.6}h_2O$

B. Na_3AIF_6

 $C. CaCO_3. MgCO_3$

D. $CaCl_2$. $MgCl_{2.6}H_2O$

Answer: C



13. Bleaching action of Bleaching powder is due to the liberation fo

A. O_2

B. OCl^-

 $\mathsf{C}. Cl_2$

D. Cl^{-}

Answer: C



14. Which of the following is different from other three oxides?

A. Mgo

B. SnO

C. ZnO

D. Cr_2O_3

Answer: A



15. Plaster of Paris hardens by

A. Giving off CO_2

B. changing into $CaCO_3$

C. combining with water

D. Giving out water

Answer: C

Watch Video Solution

16. Bleaching powder is a compound having a formula

A.
$$CaCO_3$$

B. CaClO

 $C. CaOCl_2$

D. $CaOCl_3$

Answer: C

Watch Video Solution

17. which one of the following statement is correct

for alkaline earth metal?

A. They are diatomic and form ions of the type

B. They are highly electronegative elements

C. They are monoatomic and form ions of the

type $M^{\,+\,2}$

D. They are diatomic and form ions of the type

 M^{2+}

Answer: C

Watch Video Solution

18. Gypsum $CaSO_4.2H_2O$ on heating to about $120^{\circ}C$ forms a compound which has the chemical

composition represented by

A. $2CaSO_{4.3}H_2O$

B. $CaSO_4$. H_2O

 $\mathsf{C.}\,2CaSO_4.\,H_2O$

D. $CaSO_4$

Answer: C

Watch Video Solution

19. Chemical A is used for water softening to remove temporary hardness. A reacts with sodium

carbonate to generate caustic soda. When CO_2 is bubbled through a solution of A, it turns cloudy. What is the chemical formula of A ?

A. $CaCO_3$

B. CaO

 $\mathsf{C.}\, Ca(OH)_2$

 $\mathsf{D.}\, Ca(HCO_3)_2$

Answer: C



20. Which of the following is true for magnesium?

A. It is more electropositive than sodium.

B. It si manufactured by electrolysis of aqueous

magnesium chloride.

- C. It is a strong reducing agent.
- D. It resembles, in chemical properties, with its

diagonally placed element Boron in III group

of the periodic Table.

Answer: C



21. Epson salt is the hydrate of one of the following:

A. Magnesium sulphate

B. Ferrous ammonium sulphate

C. Magnesium ammonium phosphate

D. Calcium sulphate

Answer: A

Watch Video Solution

22. Epson salt's chemical formula is

A. $MgSO_{4.7}H_2O$

 $\operatorname{B.}Mg(OH)_2$

 $\mathsf{C.}\, 2CaSO_4.\, H_2O$

D. $BaSO_4$

Answer: A

Watch Video Solution

23. Formula of gypsum salt is

A. $CaSO_4$

 $\mathsf{B.}\, CaSO_4.0.5H_2O$

 $C. CaSO_4. H_2O$

D. $CaSO_{4.2}H_2O$

Answer: D

Watch Video Solution

24. Which of the following compound of cement

sets at the slowest rate?

A. Dicalcium silicate

B. sTricalcium silicate

C. Tricalcium aluminate

D. Tetracalcium aluminoferrite

Answer: A

> Watch Video Solution

25. A sudden large jump between the values of second and third ionisation energies of an element would be associated with the electronic configuration

A. $1S^2 2s^2 2p^6 3s^1$

 $\mathsf{B}.\, 1S^2 2s^2 2p^6 3s^2 3p^1$

C. $1S^2 2s^2 2p^6 3s^2 3p^2$

D. $1S^2 2s^2 2p^6 3s^2$

Answer: D

Watch Video Solution

26. Which is the correct order of increasing basic strength?

A. MgoltBeOltCaOltBaO

B. BeOltMgOltCaOltBaO

C. BaOltCaOltMgOltBeO

D. CaOltBaOltBeOltMgO

Answer: B

Watch Video Solution

27. Electronic configuration calcium atom can be written as

A. $[Ne]4p^2$

 $\mathsf{B.}\,[Ar]4s^2$

 $\mathsf{C}.\,[Ne]4s^2$

D. $[Ar]4p^2$

Answer: B

Watch Video Solution

28. Plaster of paris is hydrate of

A. $BaSO_4$

B. $CaSO_4$

 $\mathsf{C.}\,MgSO_4$

D. $ZnSO_4$



29. Which of the following on heating at 125° C gives Plaster of Paris?

A. Borax

B. Gypsum

C. Alum

D. Calomel

Answer: B



30. Which is used in the laboratory for last drying

of neutral gases?

A. Phosphorus pentoxide

B. Active charcoal

C. Anhydrous calcium chloride

D. Na_3PO_4

Answer: C



31. The atomic numbers of four elements are given

below. Which one is an alkaline earth metal?

A. 10

B.20

C. 30

D. 40

Answer: B



32. The mixture of $MgCl_2$ and MgO is called

A. Portlant cement

B. Sorrel's cement

C. Double salt

D. None

Answer: B

•

Watch Video Solution

33. An atom with atomic number 20 is most likely to combine chemically with the atom whose atomic number is

A. 11

B. 14

C. 16

D. 10

Answer: C



34. Except lime, a major constituent of Portland

cement is

A. silica

B. Alumina

C. Iron oxide

D. Magnesia

Answer: A



35. Gypsum on heating to 390K gives

A.
$$CaSO_{4.2}H_2O$$

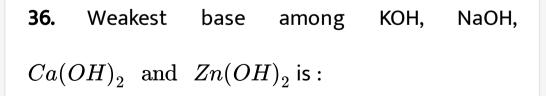
B.
$$CaSO_4$$

$$\mathsf{C.}\,CaS\frac{O_{4.1}}{2}H_2O$$

D.
$$SO_3$$
 and CaO

Answer: B





A. NaOH

$\operatorname{B.} Ca(OH)_2$

C. KOH

 $\mathsf{D.}\,ZN(OH)_2$

Answer: D

Watch Video Solution

37. Electrolysis of fused anhydrous

 $KCl. MgCl_{2.6}H_2o$ gives

A. Potasium only

B. Magnesium only

C. Magnesium and chlorine

D. Potassium and Magnesium

Answer: C

Watch Video Solution

38. Beryllium is placed above magnesium in the *II* group. Beryllium dust, therefore, when added to $MgCl_2$ solution will:

A. have no effect

B. precipitae Mg metal

C. precipitae Mg

D. leads to the dissolution of beryllium metal.

Answer: A



39. Amongest the metal Be, Mg, Ca and Sr of group

2 of the periodic table, the least ionic chloride

would be formed by

A. Mg

B.Be

C. Ca

D. Sr.

Answer: B



40. Among the following oxides, the one which is most basic is

A. Zinc oxide

B. Magnesium oxide

C. Aluminium oxide

D. Nitrogen pentoxide

Answer: B

Watch Video Solution

41. Presence of which of the following salt increases the rate of setting of Plaster of Paris.

A. NaCl

B. KCl

 $C. BaSO_4$

D. $CuSO_4$



42. Which of the following will liberate hydrogen by its reaction with hydrochloric acid?

A. Copper

B. phosphorus

C. Mercury

D. Magnesium

Answer: D



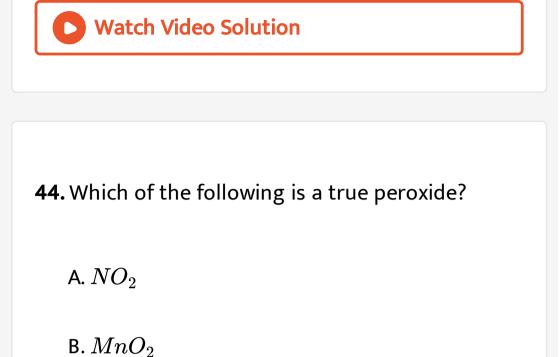
43. White heavy precipitates are formed when $BaCl_2$ is added to a clear solution of compound A. Precipitates are insoluble in dilute HCl. Then, the compound A is :

A. a nitrate

B. a bromide

C. a sulphate

D. a carbonate



- $\mathsf{C}.\,BaO_2$
- D. SO_2



45. Which of the following alkaline earth metals is

the strongest reducing agent?

A. Ca

B. Sr

C. Ba

D. Mg.



46. Which of the following carbonates will not

decompose on heating?

A. $MgCO_3$

B. $NaCO_3$

 $\mathsf{C}.\,K_2CO_3$

D. All

Answer: A



47. Sodium sulphate is soluble in water but barium

sulphate is insoluble because

A. The hydration energy of Na_2SO_4 is more

than its lattice energy

B. the lattice energy of $BaSO_4$ is more than its

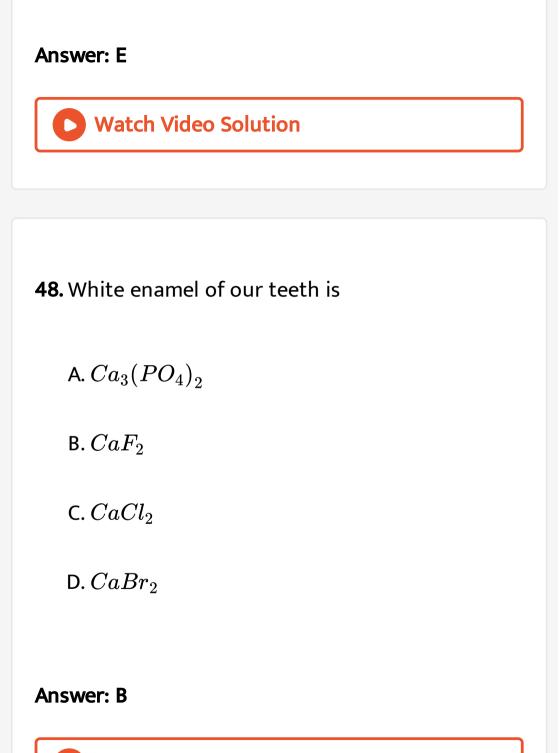
hydration energy

C. the lattice energy has no role to play in solubility

-----**)**

D. The lattice energy of Na_2SO_4 is less than its

lattice energy. Or (E) both A and B

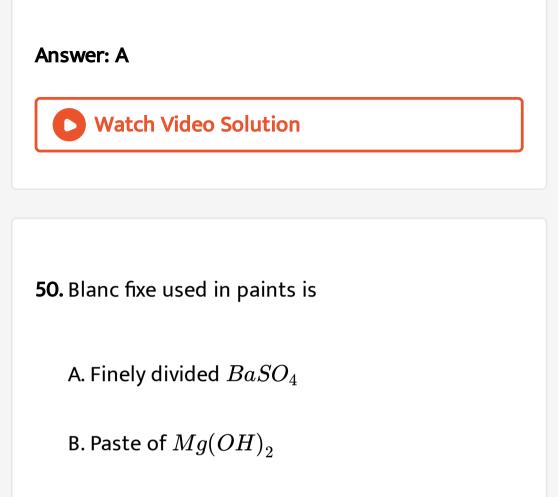


49. Identify the correct statement:

A. Gypsum contains a lower percentage fo calcium than Plaster of Paris
B. Gypsum is obtained by heating Plaster of Paris
C. Plaster of Paris can be obtained by hydration

of gypsum

D. Plaster of Paris is obtained by partial oxidation of gypsum.



C. Suspension of slaked lime

D. $MgCl_{2.5}MgO.5H_2O$

Answer: A



51. Mg burns in air to give

A. MgO

B. Mg_3N_2

 $\mathsf{C}.\,MgCO_3$

D. MgO and Mg_3N_2

Answer: D



52. Which of the following is super phosphate of lime?

A. $Ca_3(PO_4)_3$

B. $CaHPO_4$

 $\mathsf{C.}\, Ca(PO_4)_2$

D. $Ca(H_2PO_4)_2 + 2CaSO_{4.2}H_2O`$

Answer: D

53. Epson salt's chemical formula is

A. $MgSO_{4.7}H_2O$

 $\mathsf{B.}\, CaSO_4.\, H_2O$

C. $MgSO_{4.2}H_2O$

D. $BaSO_{4.2}H_2O$

Answer: A



54. Which of the following represent calcium chloride?

A. $CaClO_2$

B. $Ca(ClO_4)_2$

 $\mathsf{C.}\,Ca(ClO_3)_2$

 $\mathsf{D.}\, Ca(ClO_2)_2$

Answer: D

55. Alkaline earth metals comes under

A. Halogens

B. Represntative elements

C. Transition elements

D. Inner transition elements

Answer: B



56. Calcium is obtained by the

A. roasting of lime stone

B. electolysis fo solution of calcium chloride in

water

C. reduction fo calcium chloride with carbon

D. electrolysis fo molten anhydrous or fused

calcium chloride.

Answer: D



57. A metal is burnt in air and the ash on moistening smells of ammonia. The metal is

A. Na

B. Ferrous ammonium sulphate

C. Mg

D. Al.



58. What is X in the following reaction?

A. MgO

B. Mg

 $\operatorname{C.}Mg(OH)_2$

 $\mathsf{D}.\, Mg(OH)Cl$

Answer: A



59. The difference of number of water molecules in

gypsum and plaster of Pairs is

A.
$$\frac{5}{2}$$

B. 2
C. $\frac{1}{2}$
D. $1\frac{1}{2}$

Answer: D

60. For two ionic solids, CaO and KI, which of the

following statements is false?

A. Lattice energy of CaO is much higher than

that of KI.

B. KI is soluble in benzene

C. CaO has high m.p

D. KI has high m.p

Answer: B

61. The first ionization energies of alkaline earth metal are higher than those of the alkali metals. This is because:

A. there is increase in the nuclear charge of the

alkaline earth metals

B. there is decrease in the nuclear charge of the

alkaline earth metals

C. there is no change in the nuclear charge

D. none of the above

Vatch Video Solution

Answer: A

62. One which is not dissolved by dilute hydrochloric acid is

A. ZnS

B. MnS

 $C. BaCO_3$

D. $BaSO_4$

Answer: D



63. Which one of the salts does not impart a colour

to the flame or the flame test is not shown by

A. LiCl

B. KI

 $\mathsf{C}.\,MgCl_2$

D. $CaCl_2$



64. The one which does not show variable valency

is

A. Barium

B. Titanium

C. Copper

D. Lead

Answer: A

65. The characteristic outer electronic

configuration of alkaline earth metals is

A. ns^1

 $\mathsf{B.}\,ns^2$

 $\mathsf{C.}\,ns^2np^2$

 $\mathsf{D.}\, ns^2 np^1$

Answer: B



66. Lithophone used as white pigment is a mixture of

A. $CaSO_4 + ZnS$

 $\mathsf{B.}\,BaSO_4 + ZnS$

 $\mathsf{C.} BaSO_4 + CaSO_4$

 $\mathsf{D.}\, CaSO_4 + ZnS$

Answer: B



67. Alkaline earth metals form ions of the formula

A. $M^{2\,+}$

 $\mathsf{B.}\,M^{\,+}$

C. M

D. M^{2-}

Answer: A



68. Metals belonging to the same group in the periodic table are

A. Magnesium and sodium

B. magnesium and copper

C. magnesium and barium

D. magnesium and potassium

Answer: C

69. The compounds of alkaline earth metals have

the following magnetic nature:

A. Diamagnetic

B. Paramagnetic

C. Ferromagnetic

D. Antiferromagnetic

Answer: A

70. A chloride dissolves appreciably in cold water. When placed on platinum wire in Bunsen flame, no distinctive colour is noticed, the cation would be

A. Be^{2+}

B. Be^{2+}

 $\mathsf{C.}\, Rb^{2\,+}$

D. Ca^{2+}

Answer: A



71. Which of the following in incorrect?

A. Mg burns in air releasing dazzling light rich

in UV rays

B. $CaCl_{2.6}H_2O$ when mixed with ice gives,

freezing mixture

C. Mg cannot form complexes

D. Be can form complexes due to its very small

size

Answer: C

72. Halides of alkaline earth metals form hydrates such as $MgCl_2.6H_2O, CaCl_2.6H_2O, BaCl_2.2H_2O$ and $SrCl_2.2H_2O$. This shows that halides of group 2 elements :

A. are hygorscopic in nature

B. act as dehydrating agent

C. can absorb moisture from air

/atch Video Solution

D. All of the above

Answer: D

73. Which of the following substance can be used for drying neutral or basic gases?

A. Calcium carbonate

B. Sodium carbonate

C. Sodium bicarbonate

D. Calcium oxide

Answer: D

74. Bleaching powder loses its power on keeping for a long time because

A. It change into calcium hypochlorate

B. It changes into $CaCl_2$ and $Ca(OH)_2$

C. It absorbs moisture

D. It changes into calcium chloride and calcium

chlorate.

Answer: D

75. Among the alkaline earth metals, the element forming predominantly covalent compound is

A. Barium

B. Strontium

C. calcium

D. Beryllium

Answer: D



76. Plaster of Paris is used

A. as a plaster for walls

B. in densitry and surgery

C. in metallurgical process

D. as a drying agent

Answer: B



77. Magnesium is an important component of which biomolecule occuring extensively in living world?

A. Haemoglobin

B. Chlorophyll

C. Florigen

D. ATP.

Answer: B

78. Which of the following is the smallest cation?

A. Na^+

B. Mg^{2+}

C. Ca^{2+}

D. Al^{3+}

Answer: D

Watch Video Solution

79. A metal X on heating in nitrogen gas gives Y, Y on treatment with H_2O gives a colourless

gas which when passed through $CuSO_4$ solution

gives a blue colour. Y is:

A. $Mg(NO_3)_2$

 $\mathsf{B.}\,Mg_3N_2$

 $\mathsf{C}.NH_3$

D. MgO

Answer: B



80. Formula of plaster of Paris is

A. $CaSO_{4.2}H_2O$

B. $CaSO_4$

C. $CaSO_{4.1}/2H_2O$

D. $CaSO_4$. H_2O or (E) $CaSO_4$. $MgSO_4$

Answer: C

Watch Video Solution

81. The reaction of slaked lime with Cl_2 gas gives

A. only $Ca(Ocl)_2$

B. only $CaCl_2$

C. A

of

D. Quick lime or (e) Baryta water.

Answer: C

Watch Video Solution

82. The nitride salt of Ca when treated with H_2O gives

A. N_2

B. CaO

 $\mathsf{C.} CaH_2$

D. NH_3 or (E) N_2H_4

Answer: D

Watch Video Solution

83. The name of
$$CaSrac{O_{4.1}}{2}H_2O$$
 is

A. Gypsum

B. Epsom salt

C. Plaster of Paris

D. Dolomite



84. When one mole of bleaching powder is completely decomposed, then the mass of chlorine gas that is liberated will be

A. 35.45g

B. 70.90g

C. 17.72g

D. 88.60g



85. In the presence of cobalt chloride $(CoCl_2)$, bleaching powder decomposes to form

- A. $CaCO_3$ and O_3
- B. ClO_2 and CaO
- C. Cl_2O and CaO
- D. $CaCl_2$ and O_2

Answer: D



86. Limestone is not used in which of the following

manufacturing processes?

A. phosphorus from phosphorite

B. Ordinary (soda lime) glass

C. Iron from haematite

D. Solvay process of sodium carbonate

Answer: A

Watch Video Solution

87. On heating quicktime with coke in an electric

furnace, we get

A. Ca and CO_2

B. $CaCO_3$

C. CaO

D. CaC_2

Answer: D



88. Magnesium can be obtanied by

A. Reducing MgO with coke

B. Reducing magnesium salt solution with Fe

C. Electrolysis of fused magnesium salt

D. Electrolysis of $Mg(NO_3)_2$ solution

Answer: C



89. The metal present in chlorophyll is _____

A. Chromium

B. Cobalt

C. Magnesium

D. Iron

Answer: C



90. A solution of $MgCl_2$ in water has pH

A. lt7

B.gt7

C. 7

D. 14.2

Answer: A



91. Bleaching action of Bleaching powder is due to the liberation of

A. Ocl_2^{2-}

B. Ocl^{-}

 $\mathsf{C}.\,O_2Cl^-$

D.
$$O^{2-}$$
 or (E) Cl^{-}

Answer: B

Watch Video Solution

92. 30g Mg and 30g O_2 are reacted and the residual mixture contains:

A. 60g of MgO only

B. 40g of MgO and 20g of O_2

C. 45g of MgO and 15g of O_2

D. 50g of MgO and 10g of O_2



93. Which of the following salt will give a green colour in fire works?

A. Sodium

B. potassium

C. Barium

D. Calcium

Answer: C



94. Bleaching powder is obtained by the interaction of Cl_2 and

A. Dry slaked lime

B. hot $Ca(OH)_2$

C. cold $Ca(OH)_2$

D. conc. $CaCl_2$

Answer: A



95. Carnallite on electrolysis gives

A. Ca and Cl_2

B. Na and CO_2

C. Al and Cl_2

D. Mg and Cl_2 or (E) K and CO_2

Answer: D



96. The solubilities of carbonates decreases down the magnesium group due to a decrease in

A. entropy of solution formation

B. lattice energies of solids

C. hydration energies of cation

D. Inter ionic attraction

Answer: C

Watch Video Solution

97. The substance not likely to contain $CaCO_3$ is:

A. dolomite

B. a marble statue

C. calcined gypsum

D. sea shells.

Answer: C



98. Serveral blocks of magnesium are fixed to the bottom of a ship to

A. prevent puncturing by under sea rock

B. Keep away the sh arks

C. make the ship lighter

D. to prevent the action of water and salt.

Answer: D

Watch Video Solution

99. In curing cement plasters, water is sprinkled from time to time. This helps in

A. converting sand into silicic acid

B. keeping it cool

C. developing interlocking needle like crystals of

hydrated silicates.

D. hydrating sand and gravel mixed with

cement

Answer: C



100. The correct order of solubility of the sulphates

of alkaline earth metals in water is

A. BegtCagtMggtBagtSr

B. MggtBegtBagtCagtSr

C. BegtMggtCagtSrgtBa

D. MggtCagtBagtBegtSr

Answer: C



101. The product obtained on fusion of $BaSO_4$ and

 Na_2CO_3 is

A. $BaCO_3$

B. BaO

 $\mathsf{C}.\operatorname{Ba}(OH)_2$

D. $BaHSO_4$

Answer: A

Vatch Video Solution

102. Dead burnt plaster is

A. $(CaSO_4)_2$. H_2O

B. $CaSO_3$

 $\mathsf{C.}\, CaSO_{4.2}H_2O$

D. Anhydrous $CaSO_4$

Answer: D



103. Which of the following is not an ore of magnesium?

A. gypsum

B. Magnesite

C. Dolomite

D. Carnallite

Answer: C



104. Pick out statement (s) which is/are not true about diagonal relationship of Li and Mg: A. Polarising powers of Li^{\oplus} and Mg^{2+} ions are almost the same.

B. Like Li, Mg decomposes water very fast.

C. LiCl and $MgCI_2$ are deliquesent.

D. Like Li, Mg readily reacts with liquid bromine at ordinary temperaure.

A. 1 and 4

B. 2 and 3

C. only 2

D. only A or (E) 2 and 4



105. Which of the following exists in polymeric form

- A. $AlCl_3$
- B. $BeCl_2$
- C. SiC
- D. B_2H_4

Answer: B



106. Dead burnt plaster is

A. $CaSO_42H_2O$

 $\mathsf{B.}\, MgSO_42H_2O$

C. $CaSO_41/2H_2O$

D. $CaSO_4$ or (E) $MgSO_4$

Answer: D

Watch Video Solution

107. A solid compound 'X' on heating gives CO_2 gas and a residue. The residue mixed with water forms 'Y'. On passing an excess of CO_2 through 'Y' in water, a clear solution, 'Z' is obtained. On boiling 'Z', compound 'X' is reformed. The compound 'X' is

- A. $Ca(HCO_3)_2$
- B. $CaCO_3$
- $\mathsf{C.}\,Na_2CO_3$
- D. K_2CO_3

Answer: B





108. When calcium carbide is heated in atmosphere of nitrogen in an electric furnance, the compound formed is

A. $Ca(CN)_2$

 $\mathsf{B.}\, Ca_3N_2$

 $C. CaNC_2$

D. CaNCN

Answer: D



109. Which pair of the following chlorides does not impart color to the flame ?

A. $BeCl_2$ and $SrCl_2$

B. $BeCl_2$ and $MgCl_2$

- C. $CaCl_2$ and $BeCl_2$
- D. $BeCl_2$ and $SrCl_2$ or (E)
 - $MgCl_2$ and $CaCl_2$

Answer: B

Watch Video Solution

110. Which of the following pairs of substance would give same gaseous product on reaction with water?

A. Na and Na_2O_2

B. Ca and CaH_2

C. Ca and CaO

D. Ba and BaO_2 or (E) Ca and CaC_2

Answer: B

View Text Solution

111. Which of the following does not contain magnesium

A. Magnetite

B. Asbestos

C. Magnesite

D. Carnallite

Answer: A



112. Property of the alkaline earth metals that increases with their atomic number is

A. solubility of their hydroxides in water

B. solubility of their sulphates in water

C. ionisation energy

D. electronegativity

Answer: A

Watch Video Solution

113. Which one of the following alkaline earth metal sulphates has its hydration enthalpy greater than its lattice enthalpy?

A. $SrSO_4$

 $\mathsf{B.}\, CaSO_4$

 $\mathsf{C}.\,BeSO_4$

D. $BaSO_4$

Answer: C



114. Which of the following carbonates is the most

stable

A. $MgCO_3$

B. $CaCO_3$

C. $SrCO_3$

D. $BaSO_4$

Answer: D



115. The compound A on heating gives a colourless gas and a residue thata dissolved in water to obtain B. Excess of CO_2 is bubbled through aqueous solution of B,C is formed which is recovered in the solid form. Solid C on gentle heating gives back A. The compound is:-

A. $CaCO_3$

B. Na_2CO_3

 $\mathsf{C}.\,K_2CO_3$

D. $CaSO_{4.2}H_2O$

Answer: A



116. Which of the following compounds has the lowest melting point ?

A. CaF_2

B. $CaCl_2$

 $\mathsf{C.} CaBr_2$

D. CaI_2

Answer: D



117. Which one of the following order represents the correct sequence of the increasing basic nature of the given oxides?

A. $MgO < K_2O < Al_2O_3 < Na_2O$

B. $Na_2O < K_2O < MgO < Al_2O_3$

C. Al_2O_3ltMgOltNa_2OltK_2O`

D. $K_2O < Na_2O < Al_2O_3 < MgO$

Answer: C

Watch Video Solution

118. which one of the following represents the composition of carnallite mineral?

A. K_2O $AL_2O_36SiO_2$

B. KNO_3

 $\mathsf{C.}\,K_2SO_4MgSO_46H_2O$

D. $KClMgCl_26H_2O$

Answer: D



119. Which one of the following is present as an active ingredient in bleaching powder for bleaching action?

A. $CaOCl_2$

 $\operatorname{B.} Ca(Ocl)_2$

 $\mathsf{C.}\, CaO_2Cl$

 $\mathsf{D.}\, CaCl_2$

Answer: B



120. Match list I with list II for the composition of substance and select the correct answer using the

code given below

Answer: B



121. The alkaline earth metal which has the least density is

A. Mg

B.Be

C. Sr

D. Ca or (E) Ba

Answer: D



122. Choose the incorrect statement in the following

A. BeO is almost in soluble but $BeSO_4$ is soluble in water

B. BaO is soluble but $BaSO_4$ is in soluble in

water

C. Lil is more soluble than KI in alcohol

D. Both Li and Mg form solid hydrogen carbonates

Answer: D



123. Which of the following on thermal decomposition yields a basic as well as an acidic oxide?

A. $KCIO_3$

B. $CaCO_3$

 $\mathsf{C.} NH_4NO_3$

D. $NaNO_2$

Vatch Video Solution

Answer: B

124. Which one of the following alkaline earth metal sulphates has its hydration enthalpy greater than its lattice enthalpy?

A. $SrSO_4$

- $\mathsf{B.}\, CaSO_4$
- $C. BeSO_4$

D. $BaSO_4$

Answer: C



125. Which one of the following is present as an active ingredient in bleaching powder for bleaching action?

A. CaO_2Cl

B. $CaCl_2$

 $C. CaOCl_2$

 $D. Ca(Ocl)_2$

Answer: D

Watch Video Solution

126. In which of the following is the hydration energy higher than the lattice energy?

A. $SrSO_4$

B. $BaSO_4$

 $\mathsf{C}.MgSO_4$

D. $RaSO_4$

Answer: C



127. Which of the following is the weakest base:-

A. $Ca(OH)_2$

B. KOH

C. Li(OH)

 $\mathrm{D.}\,Sr(OH)_2$

Answer: A

Watch Video Solution

Selected Straight Objective Type Mcqs

1. Alkaline earth metal (s) which does (do) not impart colour to the flame is (are)

A. Be

B. Mg

C. Ca

D. Sr.

Answer: A,B



2. Halides of alkaline earth metal (s) soluble in organic solvent (e.g., acetone) is (are)

A. $BeCl_2$

B. $CaBr_2$

 $\mathsf{C.}\,MgBr_2$

D. $MgCI_2$

Answer: A,C,D



3. Halides (Cl', Br' and I') if alkaline earth metal (s) which cannot be dehydrated by heating is (are)

A. Ca^{2+}

B. Mg^{2+}

 $\mathsf{C.}\,Ba^{2\,+}$

D. Be^{2+}

Answer: B,D



4. Alkaline earth metal sulphates which crystallises

in hydrated form are

A. $BeSO_4$

B. $MgSO_4$

 $C. CaSO_4$

D. $SrSO_4$

Answer: A,B,C



5. Oxalates of alkaline earth metal (s) sparingly

soluble in water (is) are

A. Be

B.Ba

C. Ca

D. Sr.

Answer: B,C,D



6. Substance(s) which reduces/reduce the rate of

setting of Plaster of Paris is (are)

A. NaCl

B. Alum

C. Borax

D. $CaSO_4$

Answer: B,C

Watch Video Solution

7. Setting of cement is an

A. expansion

B. contraction

C. evolution of heat

D. absorption of heat

Answer: A,C



8. Calcium oxide can be used for drying of

A. Cl_2

$\mathsf{B.}\,H_2$

 $\mathsf{C}.NH_3$

D. CO_2

Answer: B,C



9. Magnesium is used as a reducing agent for the production of

B. Ti

C. Zr

D. Hf

Answer: B,C,D

Watch Video Solution

10. When zeolite, which is hydrated sodium aluminium silicate, is treated with hard water, the sodium ions are exchanged with

A. H^+ ions

B. Ca^{2+} ions

C.
$$SO_4^{2-}$$
 ions

D. Mg^{2+} ions or (e) OH^{-} ions

Answer: B,D

Watch Video Solution

11. In Epson salt, the number of molecules of water directly coordinated with $Mg^{2\,+}$ ion are

A. 2

B.4

C. 6

D. 7

Answer: C

Watch Video Solution

12. Potash magnesia is

A. K_2CO_3 . $MgCO_{3.5}H_2O$

B. K_2CO_3 . $MgSO_4.6H_2O$

C. 2KCl. $MgCl_2.6H_2O$

D. none of these



13. Lightest construction metal in industry is

A. Lithium

B. Calcium

C. Aluminium oxide

D. Magnesium

Answer: D



14. Alkaline earth metal oxide not having rock salt structure is

A. BeO

B. MgO

C. CaO

D. SrO

Answer: A

Watch Video Solution

15. Lightest alkaline earth metal is

A. Be

B. Mg

C. Ca

D. Sr

Answer: C

Watch Video Solution

16. The compound insoluble in acetic acid is

- A. Calcium oxide
- B. Calcium carbonate
- C. Calcium oxalate
- D. Calcium hydroxide

Answer: C



17. An important ore of magnesium is

A. Malchite

B. Cassiterite

C. Carnallite

D. Galena

Answer: C



18. The decreasing order of the second ionisation

potential of K , Ca and Ba is

(At. No : K = 19 , Ca = 20 , Ba = 56)

A. KgtCagtBa

B. CagtBagtK

C. BagtKgtCa

D. KgtBagtCa

Answer: A



19. Which of the following process is used in the extractive metallurgy of magnesium ?

A. Fused salt electrolysis

B. Self reduction

C. Aqueous solution electrolysis

D. Thermite reduction

Answer: A



20. One mole of magnesium nitride on reaction

with an excess of water gives

A. one mole of ammonia

B. one mole of nitric acid

C. two moles of ammonia

D. two moles of nitric acid

Answer: C



21. The correct order of increasing thermal stability of K_2CO_3 , $MgCO_3$, $CaCO_3$, and $BeCO_3$ is

A. $K_2CO_3 < MgCO_3 < CaCO_3 < BeCO_3$

B. $BeCO_3 < MgCO_3 < K_2CO_3 < CaCO_3$

C. $BeCO_3 < MgCO_3 < CaCO_3 < K_2CO_3$

D. $MgCO_3 < BeCO_3 < CaCO_3 < K_2CO_3$

Answer: C



22. In which of the following is the hydration energy higher than the lattice energy?

A. $SrSO_4$

 $B. BaSO_4$

 $\mathsf{C}.MgSO_4$

D. $RaSO_4$

Answer: C



23. Among the following compounds of cement which is present in the highest amount

A. Ca_2SiO_4

 $\mathsf{B.}\, Ca_2SiO_5$

 $\mathsf{C.}\,Al_2O_3$

D. $Ca_3Al_2O_4$

Answer: B

Watch Video Solution

Reason Assertion Type Mcqs

 Assertion Alkaline earth metals dissolve in liquid ammonia to give a blue-black coloured solution.
 The blue-black colour of the solution is due to the presence of ammoniated electrons.

A. Both A and R are true and R is the correct explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: D



2. Assertion Be shows similarities with Al.

Reason Be^{2+} and Al^{3+} have same ionic radii.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: B

Watch Video Solution

3. Assertion Anhydrous $CaCl_2$ cannot be used for

drying NH_3 gas

Reason NH_3 gas is basic in nature.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: B

Watch Video Solution

4. Assertion Gypsum is added to cement to increase its rate of setting.

Reason Gypsum is calcium sulphate hemihydrate.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: C

Watch Video Solution

5. Assertion Setting of cement is an exothermic process.

Reason It involves dehydration of calcium aluminates and calcium silicates.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.



6. Assertion Anhydrous $MgCl_2$ cannot be obtained by heating $MgCl_{2.6}H_2O$ $MgCl_{2.6}H_2O$ is a highly stable compound, not affected by heat.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: D

> Watch Video Solution

7. Assertion Bleaching powder is a mixed salt. Reason In the presence of $CoCl_2$ bleaching powder decomposes to give $CaCl_2$ and O_2 A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A

Watch Video Solution

8. Assertion A solution of $MgCl_2$ in water is basic in nature.

Reason $MgCl_2$ when dissolved in water undergoes

hydrolysis to give free OH^- ions.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A



9. Asserion When SO_2 is passed through lime water, it first turns milky, but becomes clear when excess of SO_2 is passed through it.

Reason The milkiness is due to the formation of insoluble $CaSO_3$ and with excess of SO_2 , $Ca(HSO_3)_2$ is formed which is soluble in water. A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: D

Watch Video Solution

10. Assertion Calcium acetylide is CaC_2

Reason CaC_2 is a calcium salt of acetylene.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A



11. Assertion (A): magnesium is not present in enamel of human teeth.

Reason (R): Magnesium is an essential elements for biological functions of human beings.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A



12. Assertion: Barium is not required for normal biological function in human.

Reason: Barium does not show variable oxidation

state.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A

Watch Video Solution

13. Assertion (A): $BaCO_3$ is more soluble in HNO_3 than in water. Reason (R): Carbonate is a weak base and reacts with H^{\oplus} ions to form strong acid causing barium

salt to dissociate.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A



14. Assertion (A): magnesium is not present in enamel of human teeth.

Reason (R): Magnesium is an essential elements

for biological functions of human beings.

A. Both A and R are true and R is the correct

explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.

Answer: A

Watch Video Solution

15. Assertion (A): Addtion of NH_4OH to an aqueous solution of $BaCl_2$ in the presence of excess of NH_4Cl precipitates $Ba(OH)_2$.

Reason (R): $Ba(OH)_2$ is insoluble in water.

A. Both A and R are true and R is the correct explanation of A

B. Both A and R are true but R is not a correct

explanation of A

C. A is true but R is false

D. A is false but R is true

or (E) Both A and R are false.



Ultimate Preparatory Package

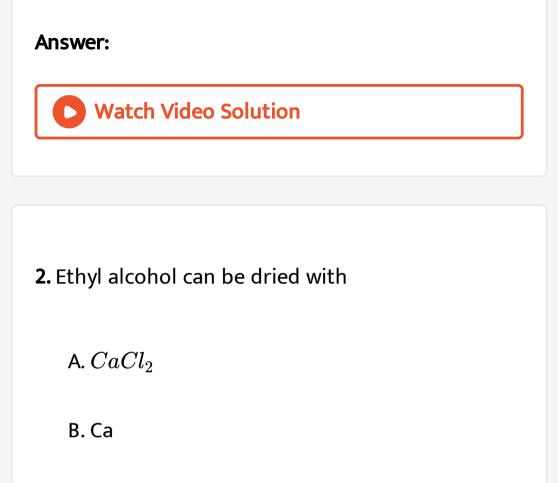
1. $BeCl_2$ is not soluble in

A. acetone

B. water

C. ether

D. carbon tetrachloride



C. Na

D. none of these



3. Anhydrous $CaCl_2$ can be used for drying

A. alcohols

B. ammonia

 ${\rm C.}\,H_2S$

D. methane



4. Alkaline earth metal not having rock salt structure is

A. BeO

B. CaO

C. BaO

D. MgO



5. Hydrated cloride of the alkaline earth metal.Which cannot be dehydrated on heating is

A. $Ba^{2\,+}$

 $\mathsf{B.}\,Be^{2\,+}$

 $\mathsf{C.}\, Ca^{2\,+}$

D. Sr^{2+}



6. Sulphate of alkaline earth metal which crystallises without water of hydration is that of

A. Be^{2+}

B. Mg^{2+}

 $\mathsf{C.}\, Ca^{2\,+}$

D. Sr^{2+}



7. Oxalates of alkaline earth metal, highly soluble in

water is that of

A. Be

B. Sr

C. Ba

D. Ca



8. A solution of Ca in liquid ammonia when evaporated to dryness gives as residue

A. pure Ca

- $\mathsf{B.}\left[Ca(NH_3)_x \right]^{2+}$
- $\mathsf{C.}\left[{Ca(NH_3)}_6 \right]^{2+}$
- D. $Ca(NH_3)_6$



9. $MgCl_2$. $NH_4Cl.6H_2O$ on heating in air gives as

residue

A. Mg(OH)Cl

 $\mathsf{B.}\,MgCl_2$

 $\mathsf{C}.\,Mg(OH)_2$

D. MgO

Answer:

Watch Video Solution

10. Calcium bicarbonate is

A. a white crystalline solid

B. a white powder

C. a colourless crystalline solid

D. none of these

Answer:



11. The metal with highest specific heat is

A. Be

B. Al

C. Ag

D. Au

Answer:



12. The alkaline earth metal with least density is

A. Be

B. Mg

C. Ca

D. Sr.

Answer:



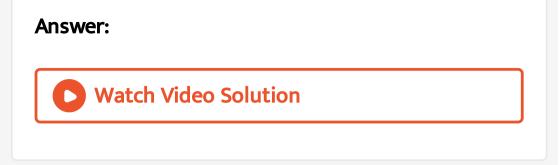
13. The alkaline earth metal harder than glass

A. Be

B. Mg

C. Ca

D. none of these



Brain Teasers 17

1. Which of the following is used to remove lignin

from wood up?

A. Unslaked lime

B. Slaked lime

C. Calcium bisulphate

D. Calcium bisulphite

Answer:



2. India has no deposits of sulphur. However, large deposits of gypsum occur in india. How can you obtain SO_2 from gypsum quantitative?

A. by heating anhydrous gypsum to 1200° C alone

B. by heating anhydrous gypsum with coke to

 $1200\,^\circ\,\text{C}$

C. by treating gypsum with conc. HNO_3 at

 $700^{\,\circ}\,{
m C}$

D. none of these

Answer:

Watch Video Solution

3. Which of the following is best suited to dry crystals of ammine salts (complexes in which NH_3

is a ligand e.g., $ig[Ni(NH_3)_6ig]Br_2ig)$

A. Anhy. $CaCl_2$

B. Anhy. CaO

C. A mixture of CaO and NH_4Cl

D. None of these

Answer:

View Text Solution

4. A solution of calcium in liquid ammonia on evaporation produces

A. $Ca(NH_3)_4$

B. $Ca(NH_3)_6$

 $\mathsf{C}.\left[Ca(NH_4)_6\right]$

D. $Ca(NH_2)_2$

Answer:



5. What is 'anhydrone'?

A. Anhy. CaO

B. Anhy. $CaCl_2$

C. Anhy. $MgCl_2$

D. Anhy. $MgClO_4$

Answer:



6. BeO is least soluble in

A. pure water

B. aqueous solution of $BeCl_2$

C. dilute HCl

D. dilute NaOH solution



7. A burning magnesium ribbon will continue to burn in

A. N_2 and steam

B. CO_2 and SO_2

 $C. N_2, CO_2$ and SO_2

D. N_2, CO_2, SO_2 and steam



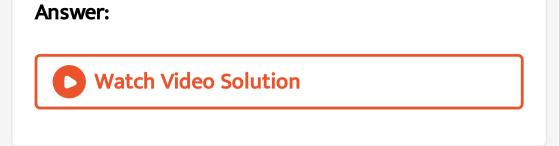
8. Consider the reaction

 $MgO + \Leftrightarrow Mg + CO$

A. The forward reaction is not possible as magnesium has more affinity for oxygen.
B. The forward reaction is possible at a temperature of above 2000°C
C. The forward reaction is possible at 2000°C if

the products of reaction are cooled rapidly.

D. none of these



9. Which of the following statements is a yellow solid in pure water?

A. KNO_3

B. KNO_2

 $\mathsf{C}.\,K_2O_2$

D. KO_2



10. Which of the following statements is not correct?

A. K is more reactive than Na

B. KOH is a stronger base than NaOH

C. KOH is less hygroscopic than NaOH

D. KOH in moist air does not produce a crust of

carbonate like NaOH.

Answer:



.



11. The lesser solubility of $NaHCO_3$ than Na_2CO_3

in water is mainly due to

A. higher lattice energy due to smaller size of

 HCO_3^- ion

B. smaller hydration energy fo larger HCO_3^-

ion

- C. intermolecular H-bonding
- D. intermolecular H-bonding between

 $NaHCO_3$ molecules and water molecules of

crystallisation.

Answer:

View Text Solution

12. The yellow light used for street and road illumination is from

A. mercury vapour lamp

B. Na

C. NaClO

D. $NaClO_3$



13. Which is manufactured by electrolysis of fused NaCl?

A. NaOH

B. K

C. Ca

D. Zn



14. Which of the following is used as scavenger in metallurgy?

A. Na

B.K

C. Ca

D. Zn



15. Which of the following substances acts as an

oxidising as well as a reducing agent?

A. NA_2O

 $\mathsf{B.}\,Na_2O_2$

 $C. NaNO_3$

D. KNO_3

Answer:

Watch Video Solution

16. $CaCO_3$ exist in

A. only one crystalline form

B. only two crystalline forms

C. three crystalline forms

D. four crystalline forms

Answer:



17. Gypsum is not chemically similar to

A. Selenite

B. alabaster

C. anhydrite

D. fluorspar

Answer:



18. The function of sand in mortar is :

A. to decrease the hardness

B. to make the mass compact

C. to decrease the plasticity of the mass

D. to present cracks when the mortar sets to a

solid mass

Answer:

View Text Solution

19. The blue coloured mineral 'Lapis Lazuli' which is used as a semi-precious stone is a mineral of the following class

A. Sodium aluminosilicates

B. Zinc cobaltate

C. Basic copper carbonate

D. prussian blue

Answer:

View Text Solution

20. A common food preservative in squashes and fruit juices is

A. Sodium metabisulphite

B. sodium sulphide

C. sodium sulphate

D. none of these

Answer:



Unit Test 12

1. K^+ and Ca^{2+} are isoelectronic but differ in

A. electronic configuration

B. ionic size

C. both (A) and (B)

D. none of the above

Answer:



2. Which causes nerve signals in animals?

A. Electrical potential gadient due to transfer

 K^+ ios

B. Electrical potential gradient due to transfer

of Na^+ ions in $\left(Na^+-K^+
ight)$ pump

C. Electrical potential gradient set up due to

transfer of Ca^{2+} ions

D. No nerve signal exists in animals

Answer:

Watch Video Solution

3. Alkali metals readily dissolve in liquid ammonia to give blue coloured solutions. The blue colour is believed to be due to

A. ammoniated cations

B. ammoniated anions

C. ammoniated electrons

D. ammoniated cations and electrons

Answer:

Watch Video Solution

4. Na_2O_2

A. is diamagnetic in nature

B. is a salt of dibasic and H_2O_2

C. oxidizes Cr^{3+} (green) to CO_4^{2-} (yellow)

D. all the correct properties of Na_2O_2

Answer:

Watch Video Solution

5. Which of the following compound decompound decomposes at highest temperature-

A. $SrCO_3$

B. $MgCO_3$

 $C. BaCO_3$

D. $CaCO_3$

