CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

ALKALI AND ALKALINE EARTH METALS

Textual Evaluation Solved Choose The Correct Answer

1. For alkali metals, which one of the following trends is incorrect?

A. Hydration energy: $Li > Na > K > Rb$

B. Ionization energy : $Li > Na > K > Rb$

C. Density : $Li < Na < K < Rb$

D. Atomic size : $Li < Na < K < Rb$

Answer: c

Watch Video Solution

2. Which of the following statements are incorrect?

A. Li^+ has minimum degree of hydration among alkali metal cations.

B. The oxidation state of K in $KO_2 is +1$

C. Sodium is used to make Na/Pb alloy.

D. $MgSO_4$ is readily soluble in water.

Answer: a

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3. Which of the following compounds will not evolve H_2 gas on reaction with alkali metals ?

A. ethanoic acid

B. ethanol

C. phenol

D. none of these

Answer: d

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4. Which of the following has the highest tendency to give the reaction $M_{(g)}^{+} \xrightarrow[\text{Medium}]{\text{Aqueous}} M_{(aq)}^{+}$

A. Na

B. Li

C. Rb

D. K

Answer: b

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5. sodium is stored in

A. alcohol

B. water

C. kerosene

D. none of these

Answer: c

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6. RbO_2 is_____

A. superoxide and paramagnetic

B. peroxide and diamagnetic

C. superoxide and diamagnetic

D. peroxide and paramagnetic

Answer: a

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7. Find the wrong statement

A. sodium metal is used in organic qualitative analysis

B. sodium carbonate is soluble in water and it is used in inorganic qualitative analysis

C. potassium carbonate can be prepared by Solvay process

D. potassium bicarbonate is acidic salt

Answer: c

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8. Lithium shows diagonal relationship with

A. sodium

B. magnesium

C. calcium

D. aluminium

Answer: b

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9. Incase of alkali metal halides, the ionic character increases in the order_____

A. $MF < MCI < MBr < MI$

B. $MI < MBr < MCI < MF$

C. $MI < MBr < MF < MCI$

D. none of these

Answer: b

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10. In which process, fused sodium hydroxide is electrolysed for extraction of sodium?

A. Castner's process

B. cyanide process

C. Down process

D. All of these

Answer: a

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11. The product obtained as a result of a reaction of nitrogen with CaC_2 is_____(NEET)

A. $Ca(CN)_3$

B. CaN_2

C. $Ca(CN)_2$

D. Ca_3N_2

Answer: c

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12. Which of the following has highest hydration energy

A. $MgCl_2$

B. $CaCl_2$

C. $BaCl_2$

D. $SrCI_2$

Answer: a

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13. Match the flame colours of the alkali and alkaline earth metal salts in the bunsen burner

(p) Sodium	(1) Brick red
(q) Calcium	(2) Yellow
(r) Barium	(3) Lilac (violet)
(s) Strontium	(4) Apple green
(t) Cesium	(5) Crimson red
(u) Potassium	(6) Blue

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14. Assertion :Generally alkali and alkaline earth metals form superoxides

Reason : There is a single bond between O and O in superoxides.

A. both assertion and reason are true and reason is the correct explanation of assertion

B. both assertion and reason are true but reason is not the correct explanation of assertion

C. assertion is true but reason is false

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Answer: d

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15. Assertion : $BeSO_4$, is soluble in water while $BaSO_4$ is not

Reason: Hydration energy decreases down the group from Be to Ba and lattice energy remian almost constant

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16. Which is the correct sequence of solubility of carbonates of alkaline earth metals ?

A. $BaCO_3 > SrCO_3 > CaCO_3 > MgCO_3$

B. $MgCO_3 > CaCO_3 > SrCO_3 > BaCO_3$

C. $CaCO_3 > BaCO_3 > SrCO_3 > MgCO_3$

D. $BaCO_3 > CaCO_3 > SrCO_3 > MgCO_3$

Answer: b

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17. In context with beryllium, which one of the following statements is incorrect?

A. It is rendered passive by nitric acid

B. It forms Be2C

C. Its salts are rarely hydrolyzed

D. Its hydride is electron deficient and polymeric

Answer: c

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18. The suspension of slaked lime in water is known as

A. lime water

B. quick lime

C. milk of lime

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19. A colourless solid substance (A) on heating evolved CO_2 and also gave a white residue, soluble in water. Residue also gave CO_2 when treated with dilute HCI.

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B. $MgCO_3 > CaCO_3 > SrCO_3 > BaCO_3$

C. $CaCO_3 > BaCO_3 > SrCO_3 > MgCO_3$

D. $BaCO_3 > CaCO_3 > SrCO_3 > MgCO_3$

Answer: b

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D. $NaHCO_3$

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B. CaF_2

C. $Ca_3(PO_4)_2$

D. CaO

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D. $Li\_(2)CO_3$

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Textual Evaluation Solved Ii Write Brief Answer To The Following Questions

1. Why sodium hydroxide is much more water soluble than chloride?

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2. Write the chemical equations for the reactions involved in solvay process of preparation of sodium carbonate

Watch Video Solution

3. An alkali metal (x) forms a hydrated sulphate, $X_2SO_{4.10}H_2O$. Is the metal more likely to the sodium (or) postassium.

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4. Write balanced chemical equation for each of the following chemical reactions

(i) Lithium metal with nitrogen gas

(ii) Heating solid sodium bicarbonate

(iii) Rubidium with oxygen gas

(iv) Solid potassium hydroxide with CO_2

(v) Heating calcium carbonate

(vi) Heating calcium with oxygen

 Watch Video Solution

5. Discuss briefly the similarities between beryllium and aluminium

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6. Give the systematic names for the following:

(i) milk of magnesia

(ii) lye

(iii) lime

(iv)caustic potash

(v) washing soda

(vi) soda ash and

(v) trona

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7. Substantiate lithium fluoride has the lowest solubility among group one metal fluorides

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8. Mention the uses of plaster of paris

Watch Video Solution

9. Beryllium halides are covalent whereas magnesium halides are ionic. Why?

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10. Alk aline earth metal (A), belongs to 3rd period reacts with oxygen and nitrogen to form compound (B) and (C) respectively. It undergo metal displacement reaction with $AgNO_3$ solution to form compound (D).

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11. Write balanced chemical equation for the following processes:

(a) heating calcium in oxygen

(b) heating calcium carbonate

(c) evaporating a solution of calcium hydrogen carbonate

(d) heating calcium oxide with carbon

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12. Explain the important common features of Group 2 elements

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13. Why group 2 elements are harder than alkali metals?

Watch Video Solution

14. How is plaster of paris prepared ?

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15. Give the uses of gypsum.

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16. Describe briefly the biological importance of calcium and magnesium.

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17. Which would you expect to have a higher melting point, magnesium oxide or magnesium fluoride? Explain your reasoning.

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Additional Questions Solved M C Q

1. Among the following pairs, which occurs in large amounts in sea water?

A. Li, Rb

B. Cs, Fr

C. Na, K

D. Be, He

Answer: C

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2. Which of the following are stored under oil?

A. Alkali metals

B. Coinage metals

C. Noble metals

D. Phosphorous

Answer: A

3. Which of the following salt is more soluble?

A. $NaClO_4$

B. $LiClO_4$

C. $CsBr$

D. KI

Answer: B

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4. Which one of the following is the smallest atom?

A. Francium

B. Rubidium

C. Lithium

D. Sodium

Answer: C

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5. Which one of the following is less soluble in water?

A. LiCl

B. NaCl

C. KCl

D. CsI

Answer: A

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6. Which one of the following gives red colour in flame test?

A. Lithium

B. Sodium

C. Potassium

D. Francium

Answer: A

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7. Which colour is produced when alkali metals dissolved in liquid ammonia?

A. Red

B. Green

C. Blue

D. Violet

Answer: C

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8. Which one of the following alkali metals is highly reactive with water?

A. Li

B. Cs

C. Rb

D. K

Answer: B

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9. Which of the following is insoluble in water?

A. LiF

B. NaCl

C. KB

D. NaBr

Answer: A

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10. Which of the following ions perform important biological functions in maintenance of the ion balance and nerve impulse conduction?

A. $Li^+ Rb^+$

B. $Na^+ K^+$

C. $Cs^+ Fr^+$

D. $Rb^+ Cs^+$

Answer: B

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11. Which is the function of sodium - potassium pump?

A. Maintenance of ion balance

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C. Transmitting nerve signals

D. Regulates the blood level

Answer: C

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12. Which of the following ions are more responsible for transmission of nerve signal?

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C. Cs^+

D. K^+

Answer: A

Watch Video Solution

13. Which of the following fruits contain maximum of potassium?

A. Grapes

B. Potatoes

C. Bananas

D. Mangoes

Answer: C

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14. Among the alkaline earth metals, which is radioactive in nature?

A. Beryllium

B. Calcium

C. Radium

D. Barium

Answer: C

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15. Among the following, which is the fifth most abundant element?

A. Beryllium

B. Barium

C. Radium

D. Calcium

Answer: D

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16. Which one of the following is covalent in character?

A. $BeCl_2$

B. $MgCl_2$

C. $CaCl_2$

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Answer: A

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17. Which one of the following is used in purification of sugar and as drying agent?

A. $Ca(OH)_2$

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C. $CaSO_4.2H_2O$

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Answer: D

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18. Statement-I: Alkali metals are very soft metals

Statement-II: Since the atoms of alkali metals have bigger kernels and smaller number of valence electrons, the metallic bonds in them are very weak and hence they are soft

A. Statements-I and II are correct but statement-II is not the correct explanation of statement-I

B. Statements-I and II are correct and statement-II is the correct explanation of statement-I

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D. Statement-I is wrong but statement-II is correct.

Answer: B

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19. Statement-I: $BeCl_2$ is soluble in organic solvent.

Statement-II: Since $BeCl_2$ is a covalent compound, it is soluble in organic solvent.

A. Statements-I and II are correct and statement-II is the correct explanation of statement-I.

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Answer: A

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20. Which one of the following is true?

A. $Ca(OH)_2$

B. $Mg(OH)_2$

C. $NaOH$

D. $Al(OH)_3$

Answer: C

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21. Statement-I: Cesium is considered as the most electropositive element

Statement-II: Due to its lowest ionization energy, cesium is considered as the most electropositive element

A. Statements-I and II are correct and statement-II is the correct explanation of statement-I.

B. Statements-I and II are correct but statement-II is not the correct explanation of

statement-I.

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Answer: A

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22. Which of the following is the least thermally stable?

A. $MgCO_3$

B. $CaCO_3$

C. $SrCO_3$

D. $BeCO_3$

Answer: D

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23. Which of the following is not a peroxide?

A. KO_2

B. Cro_5

C. Na_2O_2

D. BaO_{20}

Answer: A

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A. $MgCO_3$

B. $CaCO_3$

C. $SrCO_3$

D. $BeCO_3$

Answer: D

Watch Video Solution

46. Which of the following is not a peroxide?

A. KO_2

B. Cro_5

C. Na_2O_2

D. BaO_{20}

Answer: A

Additional Questions Solved Ii Match The Following

1. Match the following columns

List-I	List-II
A. Beryllium	1. Sacrificial anode
B. Calcium	2. X-ray tube radiation window
C. Magnesium	3. Scavenger to remove oxygen in TV
D. Barium	4. Getter in vacuum tubes

Code:	A	B	C	D
(a)	4	2	3	1
(b)	2	4	1	3
(c)	3	1	4	2
(d)	1	3	2	4

Watch Video Solution

2. Match the following columns

List-I	List-II
A. Beryllium	1. Cement
B. Magnesium	2. Dating of rocks
C. Calcium	3. X-ray detector
D. Strontium	4. Missile construction

Code:	A	B	C	D
(*a*)	3	4	1	2
(*b*)	4	3	2	1
(*c*)	1	4	3	2
(*d*)	2	3	4	1

Watch Video Solution

3.

List-I	List-II
A. Radium	1. Dehydration of oils
B. Barium	2. Aircraft and watches
C. Strontium	3. Deoxidiser in copper refining
D. Calcium	4. Radioactive tracer

A.

A	*B*	*C*	*D*
4	1	2	3

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

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

D. $\begin{matrix} A & B & C & D \\ 1 & 3 & 4 & 1 \end{matrix}$

Answer: C

Watch Video Solution

4. Match the following columns

	List-I	List-II
A.	Quick lime	1. Casts of statues
B.	Calcium hydroxide	2. Drying agent
C.	Gypsum	3. White washing
D.	Plaster of paris	4. Tooth paste

Watch Video Solution

5. Match the following columns

List-I	List-II
A. CaO	1. Plaster of Paris
B. $Ca(OH)_2$	2. Quick lime
C. $CaSO_4.2H_2O$	3. Slaked lime
D. $CaSO_4.\frac{1}{2}H_2O$	4. Gypsum

Watch Video Solution

6. Match the following columns

List-I	List-II
A. Chlorophyll	1. Plaster of paris
B. Bones	2. Gypsum
C. Dentistry	3. Magnesium
D. Cement	4. Calcium

Watch Video Solution

7. Match the following columns

List-I	List-II
A. Lithium	1. Lilac
B. Sodium	2. Reddish violet
C. Potassium	3. Crimson red
D. Rubidium	4. Yellow

Watch Video Solution

8. Match the following columns

List-I	List-II
A. Na_2CO_3	1. Caustic soda
B. $Na_2CO_3.10H_2O$	2. Baking soda
C. $NaHCO_3$	3. Soda ash
D. NaOH	4. Washing soda

Watch Video Solution

9. Match the following columns

List-I	List-II
A. Manufacture of soap	1. $Na_2CO_3.10H_2O$
B. Mild antiseptic	2. Liquid Na metal
C. Softening of hard water	3. NaOH
D. Coolant in nuclear reactor	4. $NaHCO_3$

Watch Video Solution

10. Match the following columns

List-I	List-II
A. Beryllium	1. Sacrificial anode
B. Calcium	2. X-ray tube radiation window
C. Magnesium	3. Scavenger to remove oxygen in TV
D. Barium	4. Getter in vacuum tubes

Code:	A	B	C	D
(a)	4	2	3	1
(b)	2	4	1	3
(c)	3	1	4	2
(d)	1	3	2	4

Watch Video Solution

11. Match the following columns

List-I	List-II
A. Beryllium	1. Cement
B. Magnesium	2. Dating of rocks
C. Calcium	3. X-ray detector
D. Strontium	4. Missile construction

Code:	A	B	C	D
(*a*)	3	4	1	2
(*b*)	4	3	2	1
(*c*)	1	4	3	2
(*d*)	2	3	4	1

Watch Video Solution

12.

List-I	List-II
A. Radium	1. Dehydration of oils
B. Barium	2. Aircraft and watches
C. Strontium	3. Deoxidiser in copper refining
D. Calcium	4. Radioactive tracer

A.

A	*B*	*C*	*D*
4	1	2	3

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

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

D. $\begin{matrix} A & B & C & D \\ 1 & 3 & 4 & 1 \end{matrix}$

Answer: C

Watch Video Solution

13. Match the following columns

	List-I	List-II
A.	Quick lime	1. Casts of statues
B.	Calcium hydroxide	2. Drying agent
C.	Gypsum	3. White washing
D.	Plaster of paris	4. Tooth paste

Watch Video Solution

14. Match the following columns

List-I	List-II
A. CaO	1. Plaster of Paris
B. $Ca(OH)_2$	2. Quick lime
C. $CaSO_4.2H_2O$	3. Slaked lime
D. $CaSO_4.\frac{1}{2}H_2O$	4. Gypsum

Watch Video Solution

15. Match the following columns

List-I	List-II
A. Chlorophyll	1. Plaster of paris
B. Bones	2. Gypsum
C. Dentistry	3. Magnesium
D. Cement	4. Calcium

Watch Video Solution

16. Match the following columns

List-I	List-II
A. Lithium	1. Lilac
B. Sodium	2. Reddish violet
C. Potassium	3. Crimson red
D. Rubidium	4. Yellow

Watch Video Solution

17. Match the following columns

List-I	List-II
A. Na_2CO_3	1. Caustic soda
B. $Na_2CO_3.10H_2O$	2. Baking soda
C. $NaHCO_3$	3. Soda ash
D. NaOH	4. Washing soda

Watch Video Solution

18. Match the following columns

List-I	List-II
A. Manufacture of soap	1. $Na_2CO_3.10H_2O$
B. Mild antiseptic	2. Liquid Na metal
C. Softening of hard water	3. NaOH
D. Coolant in nuclear reactor	4. $NaHCO_3$

Watch Video Solution

Additional Questions Solved Ii Fill In The Blanks

1. _____ is a radioactive in group one elements

Watch Video Solution

Watch Video Solution

2. The general electronic configuration of alkali metals is _____

Watch Video Solution

3. The half life period of francium is _____

Watch Video Solution

4. The metal present in deposits of nitre is _____

Watch Video Solution

Watch Video Solution

5. The metal present in deposits of nitre is _____

Watch Video Solution

6. Rock salt is major source of _____

Watch Video Solution

7. The general molecular formula of rock salt or table salt is_____

A. NaI

B. NaCl

C. KCl

D. KBr

Answer:

Watch Video Solution

8. The oxidation state of alkali metal is _____

Watch Video Solution

9. The second ionization enthalpy of alkali metals is _____

Watch Video Solution

10. he colour produced by potassium when burnt in Bunsen flame is_____

Watch Video Solution

11. Celestite and strontianite are the ores of _____

Watch Video Solution

12. The eighth most abundant among the alkaline earth metals is _____

A. Mg

B. Ca

C. Sr

D. Ba

Answer:

Watch Video Solution

13. _____gives green spark in fire works

A. Magnesium Chloride

B. Sodium nitrate

C. Copper chloride

D. Strontium carbonate

Answer:

Watch Video Solution

14. The correct electronic configuration of alkaline earth metal is_____

A. [noble gases]ns1

B. [noble gases]ns2

C. [noble gases]ns2np6

D. ns(n-1)d1-10

Answer:

Watch Video Solution

15. Copper chloride produces _____ colour in fire works

Watch Video Solution

16. In fire works, red colour flash is produced by_____

Watch Video Solution

17. The most common oxidation state of alkaline earth metals is_____

Watch Video Solution

18. Hydroxides of beryllium are _____ in nature

Watch Video Solution

19. When beryllium carbide reacts with water, the product mainly formed is_____

Watch Video Solution

20. _____alkaline earth metal is not readily attacked by acids

Watch Video Solution

21. _____ is used as radiation windows for X-ray tubes

Watch Video Solution

22. _____ is used to build the beam pipe in accelerators.

Watch Video Solution

23. _____ is used as a desulphurising agent for iron and steel

Watch Video Solution

24. _____s used in photoengrave plates in printing industry

Watch Video Solution

25. _____ is used in controlling galvanic corrosion

Watch Video Solution

26. _____ is used in dehydrating oils

Watch Video Solution

27. _____is the formula of limestone

Watch Video Solution

28. How is bleaching powder prepared ?

Watch Video Solution

29. Which is known as a natural insulator?

Watch Video Solution

30. _____is called animal starch

Watch Video Solution

31. _____ is used in toothpaste, shampoo and hair products.

Watch Video Solution

32. _____ plays an important role in agriculture as a soil additive, conditioner and fertilizer.

Watch Video Solution

33. _____is used to treat upset stomach and eczema

Watch Video Solution

34. About 393K, when Plaster of Paris is heated, it forms _____

Watch Video Solution

35. _____is used in dentistry, ornamental works and making casts of statues

Watch Video Solution

36. _____ metal act as co-factor in phosphate transfer of ATP by enzymes.

Watch Video Solution

37. The main pigment in plants is chlorophyll which contains _____

Watch Video Solution

38. The most common alkaline earth metal found in the human body is_____

Watch Video Solution

39. _____ alkaline earth metal do not import colour to a non-luminous flame.

Watch Video Solution

40. The reducing property of alkali metals Na, K, Rb, Cs, Li follows the order_____

Watch Video Solution

41. _____is used in photoelectric cells?

Watch Video Solution

42. When caesium salt is subjected to flame test, the colour produced is _____

Watch Video Solution

43. _____ is used in making electrochemical cells

Watch Video Solution

44. Duralumin is an alloy of

Watch Video Solution

45. Exudate form _____ is used in making palm sugar

Watch Video Solution

46. _____ is used in making electrochemical cells

Watch Video Solution

47. _____ is used as a coolant in fast breeder nuclear reactor

Watch Video Solution

48. Give the uses of carbon dioxide.

Watch Video Solution

49. _____is used in photoelectric cells?

Watch Video Solution

50. The formula of washing soda is _____

Watch Video Solution

51. _____ is used for mercerising cotton fabrics.

Watch Video Solution

52. _____ is used in fire extinguishers

Watch Video Solution

53. _____ is a radioactive in group one elements

Watch Video Solution

54. The general electronic configuration of alkali metals is _____

Watch Video Solution

55. The half life period of francium is _____

Watch Video Solution

56. The metal present in deposits of nitre is _____

Watch Video Solution

57. The metal present in deposits of nitre is _____

Watch Video Solution

58. Rock salt is major source of _____

Watch Video Solution

59. The general molecular formula of rock salt or table salt is_____

Watch Video Solution

60. The oxidation state of alkali metal is _____

Watch Video Solution

61. The second ionization enthalpy of alkali metals is _____

Watch Video Solution

62. he colour produced by potassium when burnt in Bunsen flame is_____

Watch Video Solution

63. Celestite and strontianite are the ores of _____

Watch Video Solution

64. The eighth most abundant among the alkaline earth metals is _____

Watch Video Solution

65. _____gives green spark in fire works

Watch Video Solution

66. The correct electronic configuration of alkaline earth metal is_____

Watch Video Solution

67. Copper chloride produces _____ colour in fire works

Watch Video Solution

68. In fire works, red colour flash is produced by_____

Watch Video Solution

69. The most common oxidation state of alkaline earth metals is_____

Watch Video Solution

70. Hydroxides of beryllium are _____ in nature

Watch Video Solution

71. When beryllium carbide reacts with water, the product mainly formed is_____

Watch Video Solution

72. _____alkaline earth metal is not readily attacked by acids

Watch Video Solution

73. _____ is used as radiation windows for X-ray tubes

Watch Video Solution

74. _____ is used to build the beam pipe in accelerators.

Watch Video Solution

75. _____ is used as a desulphurising agent for iron and steel

Watch Video Solution

76. _____s used in photoengrave plates in printing industry

Watch Video Solution

77. _____ is used in controlling galvanic corrosion

Watch Video Solution

78. _____ is used in dehydrating oils

Watch Video Solution

79. _____is the formula of limestone

Watch Video Solution

80. _____ is named as bleaching powder.

Watch Video Solution

81. Which is known as a natural insulator?

Watch Video Solution

82. _____is called ornamental stone

Watch Video Solution

83. _____ is used in toothpaste, shampoo and hair products.

Watch Video Solution

84. _____ plays an important role in agriculture as a soil additive, conditioner and fertilizer.

Watch Video Solution

85. _____is used to treat upset stomach and eczema

Watch Video Solution

86. About 393K, when Plaster of Paris is heated, it forms _____

Watch Video Solution

87. _____is used in dentistry, ornamental works and making casts of statues

Watch Video Solution

88. _____ metal act as co-factor in phosphate transfer of ATP by enzymes.

Watch Video Solution

89. The main pigment in plants is chlorophyll which contains _____

Watch Video Solution

90. The most common alkaline earth metal found in the human body is_____

Watch Video Solution

91. _____ alkaline earth metal do not import colour to a non-luminous flame.

Watch Video Solution

92. The reducing property of alkali metals Na, K, Rb, Cs, Li follows the order_____

Watch Video Solution

93. _____is used in photoelectric cells?

Watch Video Solution

94. When caesium salt is subjected to flame test, the colour produced is _____

Watch Video Solution

95. _____ alloy is used in making white metal bearings for motor engines?

Watch Video Solution

96. Lithium aluminium alloy is used in making _____

Watch Video Solution

97. _____is used in making armour plates.

Watch Video Solution

98. _____ is used in making electrochemical cells

Watch Video Solution

99. _____ is used as a coolant in fast breeder nuclear reactor

Watch Video Solution

100. _____is an excellent absorbent of carbon dioxide

Watch Video Solution

101. _____ is used in making electrochemical cells

Watch Video Solution

102. The formula of washing soda is _____

Watch Video Solution

103. _____ is used for mercerising cotton fabrics.

Watch Video Solution

104. _____ is used in fire extinguishers

Watch Video Solution

Additional Questions Solved Iv Choose The Odd Out

1. Choose the odd one out

A. Lithium

B. Sodium

C. Magnesium

D. Potassium

Answer:

Watch Video Solution

2. Choose the odd one out

A. Beryllium

B. Caesium

C. Magnesium

D. Calcium

Answer:

Watch Video Solution

3. Choose the odd one out

A. Calcium

B. Strontium

C. Barium

D. Potassium

Answer:

Watch Video Solution

4. Choose the odd one out

A. Rubidium

B. Potassium

C. Barium

D. Caesium

Answer:

Watch Video Solution

5. Choose the odd one out

A. Lithium

B. Sodium

C. Magnesium

D. Potassium

Answer:

Watch Video Solution

6. Choose the odd one out

A. Beryllium

B. Caesium

C. Magnesium

D. Calcium

Answer:

Watch Video Solution

7. Choose the odd one out

A. Calcium

B. Strontium

C. Barium

D. Potassium

Answer:

Watch Video Solution

8. Choose the odd one out

A. Rubidium

B. Potassium

C. Barium

D. Caesium

Answer:

Watch Video Solution

Additional Questions Solved V Choose The Correct Pair

1. Choose the correct pair

A. Lithium : Lilac

B. Potassium : Crimson red

C. Caesium : Blue

D. Rubidium : Yellow

Answer: C

Watch Video Solution

2. Choose the correct pair

A. Sodium : Sylvite

B. Potassium : Rock salt

C. Lithium : Kaoline

D. Sodium : Rock salt

Answer: D

Watch Video Solution

3. Choose the correct pair

A. Liquid sodium metal : Coolant in fast nuclear reactor

B. Caesium : fertilizer

C. Potassium chloride : devising photo electric ccils

D. Lithium carbonate : electro chemical cells

Answer: A

Watch Video Solution

4. Choose the correct pair

A. Sodium carbonate : $NaHCO_3$

B. Sodium bicarbonate : $NaHCO_3$

C. Cooking salt : NaCl

D. Baking soda : Na_2CO_3

Answer: B

Watch Video Solution

5. Choose the correct pair

A. Washing soda : NaCl

B. Baking soda:$Na_2CO_3.10H_2O$

C. Table salt:$NaHCO_3$

D. Baking soda : $NaHCO_3$

Answer: D

Watch Video Solution

6. Choose the correct pair

A. Beryllium

B. Calcium: Fluorapatite

C. Barium: Beryl

D. Strontium: Dolomite

Answer: B

View Text Solution

7. Choose the correct pair

A. Lime water: CaO

B. Quick lime:$CaSO_4 1/2 H_2O$

C. Gypsum: $Ca(OH)_2$

D. Plaster of paris : $CaSO_4 .1/2 H_2O$

Answer: D

Watch Video Solution

8. Choose the correct pair

A. Lithium : Lilac

B. Potassium : Crimson red

C. Caesium : Blue

D. Rubidium : Yellow

Answer: C

Watch Video Solution

9. Choose the correct pair

A. Sodium : Sylvite

B. Potassium : Rock salt

C. Lithium : Kaoline

D. Sodium : Rock salt

Answer: D

Watch Video Solution

10. Choose the correct pair

A. Liquid sodium metal : Coolant in fast nuclear reactor

B. Caesium : fertilizer

C. Potassium chloride : devising photo electric ccils

D. Lithium carbonate : electro chemical cells

Answer: A

Watch Video Solution

11. Choose the incorrect pair

A. Sodium carbonate : Na_2CO_3

B. Sodium bicarbonate : $NaHCO_3$

C. Cooking salt : NaCl

D. Baking soda : Na_2CO_3

Answer: B

Watch Video Solution

12. Choose the correct pair

A. Washing soda : NaCl

B. Caustic soda:$Na_2CO_3.10H_2O$

C. Table salt:$NaHCO_3$

D. Baking soda : $NaHCO_3$

Answer: D

Watch Video Solution

13. Choose the correct pair

A. Beryllium

B. Calcium: Fluorapatite

C. Barium: Beryl

D. Strontium: Dolomite

Answer: B

View Text Solution

14. Choose the correct pair

A. Lime water: CaO

B. Quick lime:$CaSO_4 1/2 H_2O$

C. Gypsum: $Ca(OH)_2$

D. Plaster of paris : $CaSO_4 .1/2 H_2O$

Answer: D

Watch Video Solution

Additional Questions Solved Vi Choose Then Incorrect Pair

1. Choose the incorrect pair

A. Lithium: Crimson red

B. Sodium : Yellow

C. Potassium : Blue

D. Rubidium : Reddish violet

Answer: C

Watch Video Solution

2. Choose the incorrect pair

A. Lithium

B. Lithium carbonate : Medicines

C. Liquid sodium : Fertilizers

D. Caesium:Photo electric cells

Answer: C

Watch Video Solution

3. Choose the incorrect pair

A. $Na_2CO_3.10H_2O$:Washing soda

B. $NaHCO_3$:Baking soda

C. NaCl:Cooking salt

D. NaOH :Soda lime

Answer: D

Watch Video Solution

4. Choose the incorrect pair

A. Calcium: Brick red

B. Strontium: Crimson

C. Sodium: Blue

D. Barium: Apple green

Answer: C

Watch Video Solution

5. Choose the incorrect pair

A. Calcium: Deoxidiser

B. Strontium: Cancer therapy

C. Radium: Aircraft switches

D. Beryllium:desiccant

Answer: D

Watch Video Solution

6. Choose the incorrect pair

A. Lithium: Crimson red

B. Sodium : Yellow

C. Potassium : Blue

D. Rubidium : Reddish violet

Answer: C

Watch Video Solution

7. Choose the incorrect pair

A. Lithium : Electrochemical cell

B. Lithium carbonate : Medicines

C. Liquid sodium : Fertilizers

D. Caesium:Photo electric cells

Answer: C

Watch Video Solution

8. Choose the incorrect pair

A. $Na_2CO_3.10H_2O$:Washing soda

B. $NaHCO_3$:Baking soda

C. NaCl:Cooking salt

D. NaOH :Soda lime

Answer: D

Watch Video Solution

9. Choose the incorrect pair

A. Calcium: Brick red

B. Strontium: Crimson

C. Sodium: Blue

D. Barium: Apple green

Answer: C

Watch Video Solution

10. Choose the incorrect pair

A. Calcium: Deoxidiser

B. Strontium: Cancer therapy

C. Radium: Aircraft switches

D. Beryllium:desiccant

Answer: D

Watch Video Solution

Additional Questions Solved Vii Assertion Reason

1. Assertion (A): Lithium salt are more soluble than salts of other metals of group-I

Reason (R): The high solubility of Li salts is due to strong solvation of small size of Li ion.

A. Both (A) and (R) are correct and (R) is the correct explanation of (A).

B. Both (A) and (R) are correct but (R) is not the correct explanation of (A)

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: D

 Watch Video Solution

2. Assertion (A): Alkali metal salts with conc.HCl on heating gives characteristic coloured flame.

Reason (R): The heat in the flame excited the valence electron to higher energy level and when it drops back, the excess energy emitted as light in the visible region gives colour

A. Both (A) and (R) are correct but (R) is not the correct explanation of (A)

B. Both (A) and (R) are correct and (R) is the correct explanation of (A)

C. (A) is correct but (R) is wrong.

D. (A) is wrong but (R) is correct

Answer: B

Watch Video Solution

3. Assertion (A): LiF is less soluble in water. Reason (R): LiF has high lattice enthalpy and small size of Li^+ and F^(-)`

A. Both (A) and (R) are correct and (R) is the correct explanation of (A)

B. Both (A) and (R) are correct but (R) is not the correct explanation of (A)

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: A

Watch Video Solution

4. Assertion (A): Sodium hydrogen carbonate is used in baking cakes and pastries

Reason (R): On heating sodium hydrogen

carbonate, liberates bubbles of CO_2 leaving holes in cakes and making them light and fluffy.

A. both (A) and (R) are correct and (R) is the correct explanation of (A)

B. both (A) and (R) are correct but (R) is not the correct explanation of (A)

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: A

 Watch Video Solution

5. Assertion (A): Lithium salt are more soluble than salts of other metals of group-I

Reason (R): The high solubility of Li salts is due to strong solvation of small size of Li ion.

A. Both (A) and (R) are correct and (R) is the correct explanation of (A).

B. Both (A) and (R) are correct but (R) is not the correct explanation of (A)

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: D

Watch Video Solution

6. Assertion (A): Alkali metal salts with conc.HCl on heating gives characteristic coloured flame.

Reason (R): The heat in the flame excited the valence electron to higher energy level and when it drops back, the excess energy emitted as light in the visible region gives colour

A. Both (A) and (R) are correct but (R) is not the correct explanation of (A)

B. Both (A) and (R) are correct and (R) is the correct explanation of (A)

C. (A) is correct but (R) is wrong.

D. (A) is wrong but (R) is correct

Answer: B

Watch Video Solution

7. Assertion (A): LiF is less soluble in water. Reason (R): LiF has high lattice enthalpy and small size of Li^+ and F^(-)`

A. Both (A) and (R) are correct and (R) is the correct explanation of (A)

B. Both (A) and (R) are correct but (R) is not the correct explanation of (A)

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: A

8. Assertion (A): Sodium hydrogen carbonate is used in baking cakes and pastries

Reason (R): On heating sodium hydrogen carbonate, liberates bubbles of CO_2 leaving holes in cakes and making them light and fluffy.

A. both (A) and (R) are correct and (R) is the correct explanation of (A)

B. both (A) and (R) are correct but (R) is not the correct explanation of (A)

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: A

Watch Video Solution

Additional Questions Solved Viii Choose The Correct Statement

1. Choose the correct statement

A. Rubidium is a radioactive element.

B. Francium is highly radioactive

C. Alkali metals are less reactive

D. Alkali metals belong to 2s group

Answer: B

2. Choose the correct statement

A. Alkali metals act as good oxidising agent.

B. Alkali metals act as good reducing agent

C. Alkaline earth metals act as dehydrating agents

D. Alkaline earth metals act as decarboxylating agents

Answer: B

Watch Video Solution

3. Choose the correct statement

A. Sodium carbonate $Na_2CO_3.10H_2O$ above 373K called soda ash

B. Sodium-calcium pump play an important role in transmitting nerve signals.

C. Radium is the most abundant alkaline earth metal.

D. Common oxidation state of alkali metal is +2

Answer: A

4. Choose the correct statement

A. Rubidium is a radioactive element.

B. Francium is highly radioactive

C. Alkali metals are less reactive

D. Alkali metals belong to 2s group

Answer: B

5. Choose the correct statement

A. Alkali metals act as good oxidising agent.

B. Alkali metals act as good reducing agent

C. Alkaline earth metals act as dehydrating agents

D. Alkaline earth metals act as decarboxylating agents

Answer: B

Watch Video Solution

6. Choose the correct statement

A. Sodium carbonate $Na_2CO_3.10H_2O$ above 373K called soda ash

B. Sodium-calcium pump play an important role in transmitting nerve signals.

C. Radium is the most abundant alkaline earth metal.

D. Common oxidation state of alkali metal is +2

Answer: A

Watch Video Solution

Additional Questions Solved

1. Why alkali metals and alkaline earth metals are called s-block elements?

Watch Video Solution

2. Why group 1 elements are called alkali metals?

Watch Video Solution

3. Which is the radioactive element in group 1 element? What is its half-life period?

Watch Video Solution

4. Alkali metals are stored under oil. Give reason.

Watch Video Solution

5. Name the list of elements present in alkali metal group. What is the configuration of them?

Watch Video Solution

6. Alkali metals never found in free state in nature. Why?

Watch Video Solution

7. The second ionization enthalpy of alkali metals are very high. Give reason

Watch Video Solution

8. $LiClO_4$ is more soluble than $NaClO_4$. Why?

Watch Video Solution

9. Why does lithium exhibit anomalous properties ?

Watch Video Solution

10. Why alkali metals have high chemical reactivity? How this changes along the group?

Watch Video Solution

11. Lithium forms monoxide with oxygen whereas sodium forms peroxide with oxygen. Why?

Watch Video Solution

12. Explain the action of hydrogen with alkali metals

Watch Video Solution

13. Alkali metal hydrides are strong reducing agents. Prove this statement.

Watch Video Solution

14. Explain the action of halogen with alkali metals

Watch Video Solution

15. Explain the action of sodium with water.

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114. Why group 1 elements are called alkali metals?

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115. Which is the radioactive element in group 1 element? What is its half-life period?

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116. Alkali metals are stored under oil. Give reason.

Watch Video Solution

117. Name the list of elements present in alkali metal group. What is the configuration of them?

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118. Alkali metals never found in free state in nature. Why?

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119. The second ionization enthalpy of alkali metals are very high. Give reason

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120. $LICIO_4$ is more soluble than $NaCIO_4$Why?

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121. Why does lithium exhibit anomalous properties ?

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122. Why alkali metals have high chemical reactivity? How this changes along the group?

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123. Lithium forms monoxide with oxygen whereas sodium forms peroxide with oxygen. Why?

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