metals earth alkaline and alkali chemistry about Worksheet الملف

More files for 11th Grade , Subject Chemistry , Term 1	
Worksheet about chemistry periodic classification	1
Worksheet abour chemistry hydrogen	2
Worksheet about Environmental chemistry	3

Unit 5

Alkali and Alkaline Earth Metals

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

   a) Hydration energy : Li > Na > K > Rb

   b) Ionisation energy : Li > Na > K > Rb

   c) Density : Li < Na < K < Rb

   d) Atomic size : Li < Na < K < Rb

2. Which of the following statements is 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

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

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

5. sodium is stored in

   a) alcohol b) water c) kerosene d) none of these

6. RbO_2 is

   a) superoxide and paramagnetic b) peroxide and diamagnetic

   c) superoxide and diamagnetic d) peroxide and paramagnetic

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

8. Lithium shows diagonal relationship with

a) sodium b) magnesium c) calcium d) aluminium

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

a) MF < MCl < MBr < MI

b) MI < MBr < MCl < MF

c) MI < MBr < MF < MCl

d) none of these

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

11. The product obtained as a result of a reaction of nitrogen with CaC_2 is (NEET - Phase I)

a) $Ca(CN)_3$ b) CaN_2 c) $Ca(CN)_2$ d) Ca_3N_2

12. Which of the following has highest hydration energy

a) $MgCl_2$ b) $CaCl_2$ c) $BaCl_2$ d) $SrCl_2$

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

a) p - 2, q - 1, r - 4, s - 5, t - 6, u - 3

b) p - 1, q - 2, r - 4, s - 5, t - 6, u - 3

c) p - 4, q - 1, r - 2, s - 3, t - 5, u - 6

d) p - 6, q - 5, r - 4, s - 3, t - 1, u - 2

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

d) both assertion and reason are false

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 remains almost constant.

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

d) both assertion and reason are false

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) $BaCO_3 > CaCO_3 > SrCO_3 > MgCO_3$

17. In context with beryllium, which one of the following statements is incorrect ? (NEET Phase - 2)

a) It is rendered passive by nitric acid

b) It forms Be_2C

c) Its salts are rarely hydrolysed

d) Its hydride is electron deficient and polymeric

18. The suspension of slaked lime in water is known as (NEET Phase - II)

a) lime water b) quick lime

c) milk of lime d) aqueous solution of slaked lime

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 HCl.

a) Na_2CO_3 b) $NaHCO_3$ c) $CaCO_3$ d) $Ca(HCO_3)_2$

20. The compound (X) on heating gives a colourless gas and a residue that is dissolved in water to obtain (B). Excess of CO_2 is bubbled through aqueous solution of B, C is formed. Solid (C) on heating gives back X. (B) is

a) $CaCO_3$ b) $Ca(OH)_2$ c) Na_2CO_3 d) $NaHCO_3$

21. Which of the following statement is false ? (NEET - Phase - I)

a) Ca^{2+} ions are not important in maintaining the regular beating of the heart

b) Mg^{2+} ions are important in the green parts of the plants

c) Mg^{2+} ions form a complex with ATP

d) Ca^{2+} ions are important in blood clotting

22. The name 'Blue John' is given to which of the following compounds ?

a) CaH_2 b) CaF_2 c) $Ca_3(PO_4)_2$ d) CaO

23. Formula of Gypsum is

a) $CaSO_4 . 2H_2O$ b) $CaSO_4 . ½ H_2O$

c) $3 CaSO_4 . H_2O$ d) $2CaSO_4 . 2H_2O$

24. When CaC_2 is heated in atmospheric nitrogen in an electric furnace the compound formed is

a) $Ca(CN)_2$ b) CaNCN

c) CaC_2N_2 d) $CaNC_2$

25. Among the following the least thermally stable is

(a) K_2CO_3 b) Na_2CO_3

(c) $BaCo_3$ d) Li_2CO_3