

13. Which of the following is correct order of solubility in water?

(A) $\text{Li}_2\text{O} > \text{Cs}_2\text{O}$

(B) LiF > CsF

(C) Both of them

(**D**) None of them

14. Which of the following has the least ionization potential?

(A)

(B) He

(C) N

(D) Be

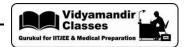
15. The most abundant alkali metal in nature is :

(A) lithium

(B) sodium

(C) potassium

(D) cesium



Date Planned : / /	Daily Tutorial Sheet-2	Expected Duration : 30 Min		
Actual Date of Attempt : / /	Level-1	Exact Duration :		

16. In which of the following reactions, H_2O_2 acts as a reducing agent?



- (A) $PbO_2(s) + H_2O_2(aq) \longrightarrow PbO(s) + H_2O(\ell) + O_2(g)$
- $Na_2SO_3(aq) + H_2O_2(aq) \longrightarrow Na_2SO_4(aq) + H_2O(\ell)$ (B)
- (C) $2KI(aq) + H_2O_2(aq) \longrightarrow 2KOH(aq) + I_2(s)$
- (D) All the above

17. High purity (> 99.95%) dihydrogen is obtained by :



- (A) Electrolysis of pure water
- **(B)** Electrolysis of warm aqueous Barium hydroxide
- (C) Action of Zn on NaOH
- (D) Electrolysis of acidulated water

18. The reaction related to coal gasification:

(A)
$$CO + H_2O \xrightarrow{Fe_2O_3 + Cr} CO_2 + H_2$$

(B)
$$C + H_2O \xrightarrow{673 \text{ K}} CO + H_2$$

(C)
$$CH_4 + H_2O \xrightarrow{Ni} CO + 3H_2$$

(B)
$$C + H_2O \xrightarrow{673 \text{ K}} CO + H_2$$
(D) $C_nH_{2n} + 2nH_2O \xrightarrow{1270 \text{ K}} nCO + (3n)H_2$

- 19. The correct statement regarding structure of ice:
 - Ice has a highly ordered three dimensional hydrogen bonded structure. (A)
 - **(B)** Each oxygen atom in ice is surrounded tetrahedrally by four other oxygen atoms at a distance of 276 pm.
 - (C) Hydrogen bonding gives ice a rather open structure with wide holes. These holes can hold some other molecules of appropriate size interstitially.

(B)

(D) All are correct

20. On heating hydrated magnesium chloride in presence of SOCl₂...... is evolved.



- CO_2 (A)
- (B) CO
- (C) SO_2
- (D) No gas

21. Which of the following represents correct order of decreasing E_{ox}° or reducing nature?

Li > Na > K > Rb (A)

Rb > K > Na > Li (B)

(C) Rb > Li > Na > K

Li > Rb > K > Na (D)

NaOH

22. Alkali metals are characterized by:

- (A) good conductors of heat and electricity
- high melting points

- (C) low oxidation potentials
- **(D)** high ionization potentials

*23. Which of the following can be used as bleaching agent:

(B)



24. Calcium hydride on hydrolysis forms:

CaOCl₂

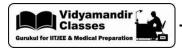
- (A) $CaO + H_2$
- $Ca(OH)_2$ only (C) $Ca(OH)_2 + H_2$ (D) (B)

 Na_2O_2

(D)

Only CaO

 KO_2



25 .	Alkali metals are powerful reducing agents because:								
	(A)	these are meta	ls		(B)	there are mone	ovalent		
	(C)	their ionic radi	ii are larg	ge	(D)	their ionization	n potenti	ials are low	
26.	Which	Which of the following properties of lithium does not show diagonal relationship with magnesium?							
	(A)	Formation of I	li ⁺ ion		(B)	Formation of I	Li ₃ N		
	(C)	Solubility of Li	iHCO ₃		(D)	Thermal decon	npositio	n of Li ₂ CO ₃	
27.	An ele	ment having elec	etronic co	onfiguration 1s ² ,	$2s^2 2p^6$	$3s^{2}3p^{6}, 4s^{1}$ wil	l form :		
	(A)	acidic oxide			(B)	basic oxide			
	(C)	amphoteric ox	ide		(D)	neutral oxide			
28.	The products of electrolysis of concentrated common salt solution are :								\odot
	(A)	$Na + Cl_2$			(B)	$H_2 + O_2$			
	(C)	$NaOH + H_2 + C$	$2l_2$		(D)	$NaOH + Cl_2 + C$	O_2		
29.	Eleme	nts in the first co	olumn of	the periodic tab	le are ca	lled alkali metal	s. These	metals have	e:
	(A)	A single valence electron							
	(B)	One electron less than an inert gas configuration							
	(C)	high melting points							
	(D)	high ionization potentials							
30 .	Potass	Potassium when heated strongly in oxygen, it forms :						\odot	
	(A)	K_2O	(B)	KO_2	(C)	${\rm K_2O_2}$	(D)	KO_3	