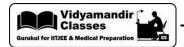


Date Planned : / /	Daily Tutorial Sheet-3	Expected Duration : 90 Min		
Actual Date of Attempt : / /	JEE Main Archive	Exact Duration :		

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31.	The temporary hardness of water is due to :									
	(A)	NaCl	(B)	$Ca(HCO_3)_2$	(C)	$\mathrm{Na_2SO_4}$	(D)	CaCl_2		
32 .	A wa	ter sample has	s ppm lev	el concentration	n of the	following meta	ls : Fe =	0.2; Mn = 5.0); $Cu = 3.0$;	
	Zn =	5.0. The metal	that make	es the water sam	nple unsi	uitable for drink	king is :		(2019)	
	(A)	Mn	(B)	Zn	(C)	Cu	(D)	Fe		
33.	The correct statements among (1) to (4) regarding H_2 as a fuel are:								(2019)	
	(1)	It produces								
	(2)									
	(3)	same amount of energy. (3) Dihydrogen is stored in tanks of metal alloys like NaNi ₅ .								
	(4)									
	(A)	(2), (3) and (4) only		(B)	(1), (2) and (3) only			
	(C)	(2) and (4) o	nly		(D)	(1) and (3) or	nly			
34.	The t	The total number of isotopes of hydrogen and number of radioactive isotopes among them, respectivel								
	are:								(2019)	
	(A)	3 and 1	(B)	3 and 2	(C)	2 and 1	(D)	2 and 0		
35.	Amor	Among the following reactions of hydrogen with halogens, the one that requires a catalyst is: (2019)								
	(A)	$H_2 + Br_2 \rightarrow 2HBr$				$H_2 + Cl_2 \rightarrow 2$	2HCI			
	(C)	$H_2 + F_2 \rightarrow 2HF$				$H_2 + I_2 \rightarrow 2I$	HI			
36.	The hydride that is not electron deficient is :								(2019)	
	(A)	AlH_3	(B)	${\rm GaH_3}$	(C)	SiH_4	(D)	B_2H_6		
37.	The h	ardness of a w	ater samp	ele (in terms of e	quivalen	ts of CaCO ₃) co	ontaining	$10^{-3}\mathrm{M}\mathrm{CaSO_4}$	is:	
	(mola	The hardness of a water sample (in terms of equivalents of $CaCO_3$) containing 10^{-3} M $CaSO_4$ is: (molar mass of $CaSO_4 = 136$ g mol^{-1}) (2019)								
	(A)	100 ppm	(B)	50 ppm	(C)	10 ppm	(D)	90 ppm		
38.	NaH	an example of	:						(2019)	
	(A)	<u>-</u>				metallic hyd	ride		(2 2,	
	(C)	(C) saline hydride				molecular hydride				
39.	The a	The amphoteric hydroxide is:							(2019)	
	(A)	$Mg(OH)_2$	(B)	$\mathrm{Be}\left(\mathrm{OH}\right)_{2}$	(C)	${\rm Ca}\left({\rm OH}\right)_2$	(D)	$Sr(OH)_2$		
40.	A me	A metal on combustion in excess air forms X. X upon hydrolysis with water yields H_2O_2 and O_2 along								
	with a	another produc	t. The me	tal is :					(2019)	
	(A)	Rb	(B)	Mg	(C)	Li	(D)	Na		



41.	The correct statement(s) among I to III with respect to potassium ions that are abundant within the cell								
	fluids is	s/are:							(2019)
	I.	They activate many enzymes							
	II.	They participate in the oxidation of glucose to produce ATP							
	III. Along with sodium ions, they are responsible for the transmission of nerve signals								
	(A)	I and III only	(B)	I, II and III	(C)	III only	(D)	I and II only	
42 .	The metal used for making X-ray tube window is :							(2019)	
	(A)	Ве	(B)	Mg	(C)	Ca	(D)	Na	
43 .	Match the following item in column I with the corresponding items in Column II. (2019)								(2019)
		Column-I				Column-II			
	(i) $Na_2CO_3 \cdot 10H_2O$ (ii) $Mg(HCO_3)_2$ (iii) $NaOH$				(A)	Portland cement ingredient			
					(B)	Castner-Kellne			
					(C)	Solvay process			
	(iv) $Ca_3Al_2O_6$			(D)	Temporary har				
	(A)	(i) (C); (ii) (D); (iii) (I	3); (iv) (A)	(B)	(i) (D); (ii) (A)	; (iii) (I	B); (iv) (C)	
	(C)	(i) (B); (ii) (C); (iii) (<i>A</i>	A); (iv) (D)	(D)	(i) (C); (ii) (B)	; (iii) (I	D); (iv) (A)	
44.	The chemical nature of hydrogen peroxide is :								(2019)
	(A)	Reducing agent in basic medium, but not in acidic medium							
	(B)	Oxidising agent in acidic medium, but not in basic medium							
	(C)	Oxidising and reducing agent in acidic medium, but not in basic medium							
	(D)	Oxidising and reducing agent in both acidic and basic medium							
45 .	The alk	xaline earth me	tal nitrat	e that does not	crystallis	e with water mol	ecules, i	is:	(2019)
	(A)	$Mg(NO_3)_2$	(B)	$Sr(NO_3)_2$	(C)	$Ba(NO_3)_2$	(D)	$Ca(NO_3)_2$	