

Date Planned : __ / __ / __	Daily Tutorial Sheet-8	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration : _____

96. Match the Column :

Column-I		Column-II	
(A)	$\text{Cu}_2\text{S} + 2\text{Cu}_2\text{O} \longrightarrow 6\text{Cu} + \text{SO}_2$	(p)	Zone refining
(B)	$\text{Ni} + 4\text{CO} \longrightarrow \text{Ni}(\text{CO})_4 \xrightarrow{\Delta} \text{Ni} + 4\text{CO}$	(q)	Van-Arkel
(C)	$\text{Ti} + 2\text{I}_2 \longrightarrow \text{TiI}_4 \xrightarrow{\Delta} \text{Ti} + \text{I}_2$	(r)	Mond's process
(D)	Silicon and Germanium	(s)	Bessemerisation

97. Match the Column :

Column-I (Process)		Column-II (Metal)	
(A)	Cyanide process	(p)	Ultrapure Ge
(B)	Floatation process	(q)	Pine oil
(C)	Electrolytic reduction	(r)	Extraction of Al
(D)	Zone refining	(s)	Extraction of Au

98. Which of the following processes is used in metallurgy of magnesium ?

- (A) Fused salt electrolysis (B) Self reduction  
(C) Aqueous solution electrolysis (D) Thermite reduction

99. In the commercial electrochemical process for aluminium extraction, the electrolyte used is :

- (A)  $\text{Al}(\text{OH})_3$  in NaOH solution  
(B) An aqueous solution of  $\text{Al}_2(\text{SO}_4)_3$   
(C) A molten mixture of  $\text{Al}_2\text{O}_3$  and  $\text{Na}_3\text{AlF}_6$   
(D) A molten of  $\text{AlO}(\text{OH})$  and  $\text{Al}(\text{OH})_3$

100. Carbon cannot be used in the reduction of  $\text{Al}_2\text{O}_3$  because :


- (A) It is an expansive process  
(B) The enthalpy of formation (energy required for formation) of  $\text{CO}_2$  is more than that of  $\text{Al}_2\text{O}_3$   
(C) Pure carbon is not easily available  
(D) The enthalpy of formation of  $\text{Al}_2\text{O}_3$  is too high

\*101. Coal gas is filled above the electrolyte in electrolysis of fused carnallite. Why ?

- (A) to increase the pressure above (B) to avoid reaction of Mg with  $\text{O}_2$   
(C) to avoid reaction of Mg and  $\text{N}_2$  (D) to avoid reaction of Mg with Ar

102. In castner's process the material used as anode is :

- (A) Ni (B) Fe (C) C (D) Pt

103. During the electrolysis of carnallite,  $\text{MgCl}_2$  is decomposed and not  $\text{KCl}$ . This is because of : 
- (A) Lower decomposition voltage of  $\text{MgCl}_2$  than that of  $\text{KCl}$   
(B) Reverse reaction  $\text{MgCl}_2 + 2\text{K} \rightarrow \text{Mg} + 2\text{KCl}$  if  $\text{KCl}$  is decomposed under other experimental condition  
(C) Both (A) and (B)  
(D) None of the above
104. The reduction of an oxide by aluminium is called :
- (A) Baeyer's process (B) Goldschmidt's aluminothermite process  
(C) Hall's process (D) Van Arkel process
105. Incorrect statement in electrolysis of  $\text{Al}_2\text{O}_3$  by Hall-Heroult process is :
- (A) Cryolite  $\text{Na}_3[\text{AlF}_6]$  lowers the m.pt. of  $\text{Al}_2\text{O}_3$  and increases its electrical conductivity  
(B)  $\text{Al}$  is obtained at cathode and  $\text{CO}_2$  at anode  
(C)  $\text{Li}_2\text{CO}_3$  can be used in place of cryolite ( $\text{Na}_3\text{AlF}_6$ )  
(D)  $\text{MgF}_2$  can be used in place of flourspar ( $\text{CaF}_2$ )