

Date Planned : / /	Daily Tutorial Sheet-2	Expected Duration : 90 Min		
Actual Date of Attempt : / /	JEE Advanced (Archive)	Exact Duration :		

answer by darkening the appropriate box. Column I (A) $PbS \rightarrow PbO$ (P) roasting (B) $CaCO_3 \rightarrow CaO$ (Q) calcination (C) $ZnS \rightarrow Zn$ (R) carbon reduction (D) $Cu_2S \rightarrow Cu$ (S) self-reduction *17. Extraction of metal from the ore cassiterite involves: (A) carbon reduction of an oxide ore (B) self-reduction of a sulphide ore (C) removal of copper impurity (D) removal of iron impurity 18. In the cyanide extraction process of silver from argentite ore, the oxidizing and reducing agents used are (A) O_2 and CO respectively (B) O_2 and CO respectively (C) CO HNO3 and CO respectively (D) HNO3 and CO respectively 19. Sulfide ores are common for the metals: (A) Cu and CO and CO (B) CO and CO respectively 19. The carbon-based reduction method is NOT used for the extraction of: (C) CO aluminium from CO aluminium from CO and CO	16	Motol	h the commonsis	na in Ca	oluman I with	the trme(a)	of reaction(s) girron in	Column II	India	ata waxa
Column I (A) PbS → PbO (B) CaCO ₃ → CaO (C) ZnS → Zn (R) carbon reduction (D) Cu ₂ S → Cu (E) self-reduction (E) removal of copper impurity (E) removal of iron impurity (E) HNO ₃ and CO respectively (C) HNO ₃ and Zn dust respectively (D) HNO ₃ and Co respectively (E) Ag, Mg and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (C) Ag, Mg and Pb (D) Al, Cu and Pb (E) Ag, Mg and Pb (D) Al, Cu and Pb (E) Ag, Mg and Pb (D) Al, Cu and Pb (E) Ag, Mg and Pb (D) Al, Cu and Pb (E) Ag, Mg and Pb (D) Al, Cu and Pb (E) (2013) (A) tin from SnO ₂ (B) iron from Fe ₂ O ₃ (C) aluminium from Al ₂ O ₃ (D) magnesium from MgCO ₃ · CaCO ₃ *21. Upon heating with Cu ₂ S, the reagent(s) that give copper metal is/are: (A) CuFeS ₂ (B) CuO (C) Cu ₂ O (D) CuSO ₄ *22. Copper is purified by electrolytic refining of blister copper. The correct statement(s) about this process is(are): (A) impure Cu strip is used as cathode (B) acidified aqueous CuSO ₄ is used as electrolyte (C) pure Cu deposits at cathode (D) impurities settle as anode-mud.	16.					the type(s)	or reaction(s	given in	Column II.	maica	-
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is(are): (A) impure Cu strip is used as cathode (B) acidified aqueous CuSO ₄ is used as electrolyte (C) pure Cu deposits at cathode (D) impurities settle as anode-mud.		(A)	Cure3 ₂	(D)	CuO	(C)	Cu ₂ O	(D)	Cu3O ₄		
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(C) pure Cu deposits at cathode (D) impurities settle as anode-mud.									(2010)		
(D) impurities settle as anode-mud.											
23. Match the anionic species given in Column I that are present in the ore(s) given in Column II. (2015)	23.										
								II.	(2015)		
Column II (A) Contamate (B) Sidesite		(4)				(D)					
(A) Carbonate(B) Sulphide(C) Malachite											
(B) Sulphide (Q) Malachite (C) Hydroxide (R) Bauxite											
(D) Oxide (S) Calamine			•								
(T) Argentite		()	Omac								



*24.	Extrac	ction of copper from copper pyrites (CuFe	S_2) invo	lives :	(2017)			
	(A)	crushing followed by concentration of t	he ore by	y froth-floatation				
	(B)	removal of iron as slag						
	(C)	self-reduction step to produce `blister o	opper' fo	ollowing evolution of SO_2				
	(D)	refining of 'blister copper' by carbon red	duction.					
25.	Galena (an ore) is partially oxidized by passing air through it at high temperature. After some time passage of air is stopped, but the heating is continued in a closed furnace such that the continuergo self-reduction. The weight (in kg) of Pb produced per kg of O_2 consumed is (2) (Atomic weights in g mol ⁻¹ ; $O = 16$, $S = 32$, $Pb = 207$)							
26 .	Calam	Calamine, malachite, magnetite and cryolite, respectively, are :						
	(A)	$ZnSO_4$, $CuCO_3$, Fe_2O_3 , AlF_3	(B)	ZnCO ₃ , CuCO ₃ .Cu(OH) ₂ , Fe ₃ O ₄ , Na	a ₃ AlF ₆			
	(C)	${\rm ZnSO_4,Cu(OH)_2,Fe_3O_4,Na_3AlF_6}$	(D)	$ZnCO_3, CuCO_3, Fe_2O_3, Na_3AlF_6$				
*27.	The cy	The cyanide process of gold extraction involves leaching out gold from its ore with CN^- in the presence of						
	Q in water to form R. Subsequently, R is treated with T to obtain Au and Z. Choose the correct option(s) :							
	(A)	T is Zn	(B)	R is [Au(CN) ₄]	(2019)			
	(C)	Z is $[Zn(CN)_4]^{2-}$	(D)	Q is O_2				