

### AIPMT 2007

1. Sulphide ores of metals are usually concentrated by froth floatation process. Which one of the following sulphide ores offers an exception and is concentrated by chemical leaching?
- (1) Sphalerite (2) Argentite  
(3) Galena (4) Copper pyrites

### AIPMT-Pre 2011

2. Which of the following elements is present as the impurity to the maximum extent in the pig iron ?
- (1) Manganese (2) Carbon  
(3) Silicon (4) Phosphorus
3. Which of the following pairs of metals is purified by Van Arkel method ?
- (1) Ga and In (2) Zr and Ti  
(3) Ag and Au (4) Ni and Fe

### AIPMT-Mains 2011

4. The following reactions take place in the blast furnace in the preparation of impure iron. Identify the reaction pertaining to the formation of the slag:-
- (1)  $2C(s) + O_2(g) \rightarrow 2CO(g)$   
(2)  $Fe_2O_3(s) + 3CO(g) \rightarrow 2Fe(l) + 3CO_2(g)$   
(3)  $CaCO_3(s) \rightarrow CaO(s) + CO_2(g)$   
(4)  $CaO(s) + SiO_2(s) \rightarrow CaSiO_3(s)$

### AIPMT-Pre 2012

5. Aluminium is extracted from alumina ( $Al_2O_3$ ) by electrolysis of a molten mixture of:
- (1)  $Al_2O_3 + Na_3AlF_6 + CaF_2$   
(2)  $Al_2O_3 + KF + Na_3AlF_6$   
(3)  $Al_2O_3 + HF + NaAlF_4$   
(4)  $Al_2O_3 + CaF_2 + NaAlF_4$
6. In the extraction of copper from its sulphide ore, the metal is finally obtained by the reduction of cuprous oxide with:
- (1) Iron sulphide ( $FeS$ )  
(2) Carbon monoxide ( $CO$ )  
(3) Copper (I) sulphide ( $Cu_2S$ )  
(4) Sulphur dioxide ( $SO_2$ )

7. Identify the alloy containing a non-metal as a constituent in it.
- (1) Bell metal  
(2) Bronze  
(3) Invar  
(4) Steel
8. Which one of the following is a mineral of iron?
- (1) Pyrolusite  
(2) Magnetite  
(3) Malachite  
(4) Cassiterite

### Re-AIPMT 2015

9. In the extraction of copper from its sulphide ore, the metal is finally obtained by the reduction of cuprous oxide with :-
- (1) copper(I) sulphide  
(2) sulphur dioxide  
(3) iron(II) sulphide  
(4) carbon monoxide

### NEET-I 2016

10. Match items of **Column I** with the items of **Column II** and assign the correct code :

	Column-I		Column-II
(a)	Cyanide process	(i)	Ultrapure Ge
(b)	Froth floatation process	(ii)	Dressing of ZnS
(c)	Electrolytic reduction	(iii)	Extraction of Al
(d)	Zone refining	(iv)	Extraction of Au
		(v)	Purification of Ni

**Code :**

- |           |       |       |      |
|-----------|-------|-------|------|
| (a)       | (b)   | (c)   | (d)  |
| (1) (iv)  | (ii)  | (iii) | (i)  |
| (2) (ii)  | (iii) | (i)   | (v)  |
| (3) (i)   | (ii)  | (iii) | (iv) |
| (4) (iii) | (iv)  | (v)   | (i)  |

**NEET-II 2016**

- 11.** Zinc can be coated on iron to produce galvanized iron but the reverse is not possible. It is because:
- (1) zinc has lower negative electrode potential than iron
  - (2) zinc has higher negative electrode potential than iron
  - (3) zinc is lighter than iron
  - (4) zinc has lower melting point than iron

**NEET(UG) 2017**

- 12.** Extraction of gold and silver involves leaching with  $\text{CN}^-$  ion. Silver is later recovered by :-
- (1) distillation
  - (2) zone refining
  - (3) displacement with Zn
  - (4) liquation

**NEET(UG) 2018**

- 13.** Considering Ellingham diagram, which of the following metals can be used to reduce alumina ?
- (1) Fe                               (2) Zn  
(3) Mg                              (4) Cu

**NEET(UG) 2019**

- 14.** Which one is malachite from the following ?  
 (1)  $\text{CuFeS}_2$  (2)  $\text{Cu}(\text{OH})_2$   
 (3)  $\text{Fe}_3\text{O}_4$  (4)  $\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$

**NEET(UG) 2019 (ODISHA)**

- 15.** Identify the incorrect statement.
- (1) The scientific and technological process used for isolation of the metal from its ore is known as metallurgy
  - (2) Minerals are naturally occurring chemical substances in the earth's crust
  - (3) Ores are minerals that may contain a metal
  - (4) Gangue is an ore contaminated with undesired materials

**NEET(UG) 2020**

- 16.** Identify the **correct** statement from the following:
- (1) Pig iron can be moulded into a variety of shapes.
  - (2) Wrought iron is impure iron with 4% carbon.
  - (3) Blister copper has blistered appearance due to evolution of  $\text{CO}_2$ .
  - (4) Vapour phase refining is carried out for Nickel by Van Arkel method.

**NEET(UG) 2020(COVID-19)**

- 17.** Match the elements in Column I with methods of purification in Column II.

### Column I

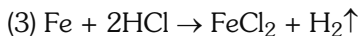
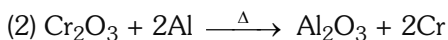
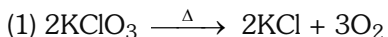
### Column II

- (a) Boron (i) Van Arkel method  
(b) Tin (ii) Mond's process  
(c) Zirconium (iii) Liquefaction  
(d) Nickel (iv) Zone refining
- (1) (a)-(iv) (b)-(iii) (c)-(i) (d)-(ii)  
(2) (a)-(iv) (b)-(iii) (c)-(ii) (d)-(i)  
(3) (a)-(ii) (b)-(i) (c)-(iv) (d)-(iii)  
(4) (a)-(iii) (b)-(iv) (c)-(i) (d)-(ii)

**NEET(UG) 2021**

- 18.** Which one of the following methods can be used to obtain highly pure metal which is liquid at room temperature ?
- (1) Electrolysis                      (2) Chromatography  
(3) Distillation                        (4) Zone refining

- 19.** Which of the following reactions is the metal displacement reaction ? Choose the right option.



- 20.** The maximum temperature that can be achieved in blast furnace is :

- (1) upto 1200 K                      (2) upto 2200 K  
(3) upto 1900 K                      (4) upto 5000 K

<b>Que.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Ans.</b>	2	2	2	4	1	3	4	2	1	1	2	3	3	4	4
<b>Que.</b>	16	17	18	19	20										
<b>Ans.</b>	1	1	3	2	2										