

**DPP EXERCISE**  
**NEET**  
**INORGANIC CHEMISTRY**  
  
**BY**  
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**METALLURGY**

**ETOOSINDIA**  
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**DPP -1**

1. Which metal is used for extraction of Au and Ag and also for galvanisation of iron objects ?

- (1) Mg (2) Zn (3) Cr (4) Co

Ans. (2)

2. Which of the following is not correctly matched ?

- (1) Chalcopyrites  $\rightarrow$   $\text{CuFeS}_2$   
(2) Smithsonite  $\rightarrow$   $\text{ZnCO}_3$   
(3) Magnetite  $\rightarrow$   $\text{Fe}_3\text{O}_4$   
(4) Argentite  $\rightarrow$   $\text{Na}_3\text{AlF}_6$

Ans. (4)

3. Which of the following is not a mineral of aluminium ?

- (1) Bauxite (2) Cryolite (3) China clay (4) Malachite

Ans. (4)

4. Which of the following is acidic flux

- (1) CaO (2) MgO (3)  $\text{SiO}_2$  (4) All of these

Ans. (3)

5. In the metallurgy of iron, the slag is

- (1)  $\text{FeSiO}_3$  (2)  $\text{CaCO}_3$  (3)  $\text{CaSiO}_3$  (4) CaO

Ans. (3)

6. Which of the following is concentrated by magnetic separation method ?

- (1) Pyrolusite  $\text{MnO}_2$  (2) Chromite ore  $\text{FeO} \cdot \text{Cr}_2\text{O}_3$   
(3) Magnetite  $\text{Fe}_3\text{O}_4$  (4) All of these

Ans. (4)

7. Which of the following is commonly used to produce foam in froth floatation process ?

- (1) Pine oil (2) Cresol (3) NaCN (4) Xanthate

Ans. (1)

8. Serpeck's method involves the heating of bauxite with

- (1) NaOH (2)  $\text{Na}_2\text{CO}_3$  (3)  $\text{N}_2 + \text{C}$  (4)  $\text{CaCO}_3$

Ans. (3)

9. Sulphide ore is converted to oxide form by using the process

- (1) Calcination (2) Roasting (3) Smelting (4) Leaching

Ans. (2)

10. Which of the following oxides cannot be reduced by auto or self reduction ?

- (1) HgO (2)  $\text{Cu}_2\text{O}$  (3) PbO (4)  $\text{Al}_2\text{O}_3$

Ans. (4)

11. Which of the following is used as reducing agent in Gold Schmidt method ?

- (1) Al (2) K (3) C (4) Mg

Ans. (1)

**DPP- 2**

1. Which of the following is used to reduce  $\text{TiCl}_4$  to Ti ?

- (1) C (2) Al (3) Mg (4)  $\text{H}_2$

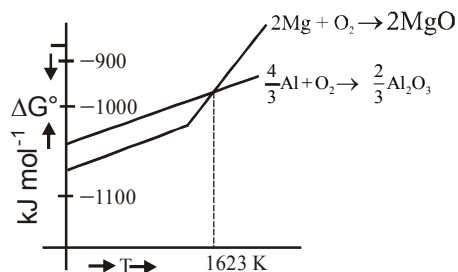
Ans. (3)

2. Ellingham diagrams are plots of  $\Delta G_f^\circ$  Vs T for the formation of

- (1) Oxides (2) Halides (3) Sulphides (4) All of these

Ans. (4)

3. Which of the following statement is correct w.r.t. the following graph ?



- (1) Below 1623 K, Mg reduces  $\text{Al}_2\text{O}_3$   
(2) Above 1623 K, Mg reduces  $\text{Al}_2\text{O}_3$   
(3) Both (1) & (2) are correct  
(4) Both (1) & (2) are wrong

Ans. (3)

4. In Ellingham diagrams of  $\Delta_f G$  oxide formation Vs T, which of the following graphs has negative slope ?

- (1)  $\text{C} \rightarrow \text{CO}$  (2)  $\text{Fe} \rightarrow \text{Fe}_2\text{O}_3$  (3)  $\text{Mg} \rightarrow \text{MgO}$  (4) All of these

Ans. (1)

5. Which of the following is incorrect w.r.t. metallurgy of iron in the blast furnace ?

- (1) Zone of combustion :  $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$   
(2) Zone of heat absorption :  $\text{CO}_2 \rightarrow \text{C} + \text{O}_2$   
(3) Zone of slag formation :  $\text{CaO} + \text{SiO}_2 \rightarrow \text{CaSiO}_3$   
(4) Zone of reduction :  $\text{Fe}_2\text{O}_3 + 3\text{C} \rightarrow 3\text{CO} + 2\text{Fe}$

Ans. (2)

6. Which of the following has the lowest percentage of carbon in it ?

- (1) Pig iron (2) Cast iron (3) Wrought iron (4) Haematite

Ans. (3)

7. Roasting of sulphate ore is generally performed in

- (1) Muffle furnace (2) Bessemer converter  
(3) Blast furnace (4) Reverberatory furnace

Ans. (4)

8. Zinc is extracted from zinc blende by

- (1) Carbon reduction process                      (2) Nitrogen reduction process  
(3) Oxygen reduction process                      (4) All of these

**Ans. (1)**

9. Which of the following is leached with NaCN ?

- (1) Ore of Al                      (2) Ore of Cu                      (3) Ore of Ag                      (4) Ore of Zn

**Ans. (3)**

10. Hall Heroult method is used for the extraction of

- (1) Ti                      (2) Al                      (3) Au                      (4) Zn

**Ans. (2)**

11. Poling is used for purification of metals having impurities of

- (1) Metal sulphides                      (2) Metal carbonates                      (3) Metal bicarbonates                      (4) Metal oxides

**Ans. (4)**

**DPP - 3**

1. Impure zinc, as collected from earthen clay retort, is called  
(1) Blister zinc                      (2) Pig zinc                      (3) Zinc spelter                      (4) Cast zinc  
**Ans. (3)**
2. The process of converting hydrated alumina into anhydrous alumina is called  
(1) Roasting                      (2) Calcination                      (3) Dressing                      (4) Smelting  
**Ans. (2)**
3. Extraction of zinc from zinc blende is achieved by  
(1) Electrolytic reduction  
(2) Roasting followed by reduction with carbon  
(3) Roasting followed by reduction with another metal  
(4) Roasting followed by self reduction  
**Ans. (2)**
4. Which of the following metal is purified by distillation process ?  
(1) Zn                      (2) Fe                      (3) Al                      (4) Cu  
**Ans. (1)**
5. Vapour phase refining can be carried out in case of  
(1) Ni                      (2) Zr                      (3) Ti                      (4) All of these  
**Ans. (4)**
6. Which of the following gives metal by electrolytic reduction conveniently and profitably ?  
(1) PbO                      (2) Fe<sub>2</sub>O<sub>3</sub>                      (3) Cr<sub>2</sub>O<sub>3</sub>                      (4) Al<sub>2</sub>O<sub>3</sub>  
**Ans. (4)**
7. Which of the following is not a method of purification of metals ?  
(1) Liquation                      (2) Distillation                      (3) Zone refining                      (4) Galvanisation  
**Ans. (4)**
8. Which of the following metal can be extracted by self reduction process ?  
(1) Pb                      (2) Hg                      (3) Cu                      (4) All of these  
**Ans. (4)**
9. Which of the following metal can be extracted without using reducing agent ?  
(1) Sn                      (2) Pb                      (3) Fe                      (4) Both (1) & (2)  
**Ans. (2)**
10. Which of the following metal is extracted by using coke and carbon monoxide as reducing agent ?  
(1) Ne                      (2) Cu                      (3) Fe                      (4) Al  
**Ans. (3)**
11. Which of the following metal is extracted by the use of cyanide solution ?  
(1) Pb                      (2) Zn                      (3) Mn                      (4) Ag  
**Ans. (4)**

**DPP - 4**

1. A substance which reacts with gangue to form fusible material is called  
(1) Flux (2) Catalyst (3) Ore (4) Slag  
**Ans. (1)**
2. Electrolytic reduction method is used for extraction of  
(1) Highly electronegative elements  
(2) Transition elements  
(3) Highly electropositive elements  
(4) Metalloids  
**Ans. (3)**
3. Cyanide process is used for the extraction of  
(1) Au (2) Cu (3) Zn (4) Fe  
**Ans. (1)**
4. Calcination is the process in which  
(1) Heating the ore in presence of air (2) Heating the ore in absence of air  
(3) Heating in vacuum (4) Heating of ore in presence of  $N_2$   
**Ans. (2)**
5. Which of the following metals cannot be extracted by carbon reduction process ?  
(1) Pb (2) Al (3) Hg (4) Zn  
**Ans. (2)**
6. Which of the following is not a refining process ?  
(1) Mond's process (2) Van-Arkel process (3) Poling (4) Leaching  
**Ans. (4)**
7. Which of the following is not a concentration technique ?  
(1) Levigation (2) Froth-flotation (3) Leaching (4) Calcination  
**Ans. (4)**
8. The ores that are concentrated by froth floatation method are  
(1) Carbonate (2) Sulphides (3) Oxides (4) Phosphates  
**Ans. (2)**
9. In blast furnace, iron oxide is reduced by  
(1) Silica (2) CO (3)  $H_2S$  (4) Lime stone  
**Ans. (2)**
10. The silver complex formed during cyanide process is  
(1)  $Na_2[Ag(CN)]$  (2)  $Na[Ag(CN)]$  (3)  $Na_2[Ag(CN)_2]$  (4)  $Na[Ag(CN)_2]$   
**Ans. (4)**
11. Zincite and calamine respectively are  
(1) Oxide and carbonate ore of Zn (2) Carbonate and oxide ore of Zn  
(3) Oxide and sulphate ore of Zn (4) Sulphate and sulphite ore of Zn  
**Ans. (1)**

**DPP - 5**

1. Which of the following is chalcopyrite ?  
(1)  $\text{CuFeS}_2$  (2)  $\text{FeS}_2$  (3)  $\text{KMgCl}_3 \cdot 6\text{H}_2\text{O}$  (4)  $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$   
**Ans. (1)**
2. The alloy used in dental filling contains  
(1) Ag and Sn (2) Ag and Sb (3) Hg, Ag and Sn (4) Hg, Ag and Sb  
**Ans. (3)**
3. What will happen, if anode is made of nickel instead of graphite in the extraction of aluminium from  $\text{AlCl}_3$  ?  
(1) Nickel will be affected by high temperature (2) Nickel will combine with  $\text{Cl}_2$   
(3) Nickel is insulator (4) All of these  
**Ans. (2)**
4. When molten NaCl is electrolysed by using inert electrode, the product obtained at cathode is  
(1) Na (2)  $\text{Cl}_2$  (3)  $\text{H}_2$  (4) Na-Hg amalgam  
**Ans. (1)**
5. What is the slag formed from  $\text{P}_2\text{O}_5$  impurity in metallurgy of iron ?  
(1)  $\text{Ca}_3(\text{PO}_4)_2$  (2)  $\text{CaSiO}_3$  (3)  $\text{Fe}_3(\text{PO}_4)_2$  (4)  $\text{FeSiO}_3$   
**Ans. (1)**
6. By which process zinc is extracted from zinc blende ?  
(1) Electrolytic reduction  
(2) Roasting followed by reduction with carbon  
(3) Calcination followed by reduction with carbon  
(4) Roasting followed by self reduction  
**Ans. (2)**
7. From gold amalgam, gold may be recovered by  
(1) Distillation (2) Oxidation (3) Electrolytic refining (4) Dissolving in  $\text{HNO}_3$   
**Ans. (1)**
8. Which of the following oxide is thermally least stable ?  
(1) CaO (2)  $\text{Al}_2\text{O}_3$  (3)  $\text{Fe}_2\text{O}_3$  (4)  $\text{Ag}_2\text{O}$   
**Ans. (4)**
9. Thomas slag is  
(1) Calcium silicate (2) Anode mud (3)  $\text{FeSiO}_3$  (4) Calcium phosphate  
**Ans. (4)**
10. Which of the following give respective metal by self reduction ?  
(1) Galena  $\text{PbS}$  (2)  $\text{HgS}$  (3)  $\text{ZnS}$  (4) Both (1) & (2)  
**Ans. (4)**
11. Which of the following statement is incorrect ?  
(1)  $\text{Al}_2\text{O}_3$  cannot be reduced into Al by  $\text{Cr}_2\text{O}_3$  (2) Ca is stronger reducing into Al by  $\text{Cr}_2\text{O}_3$   
(3) At 673 K, CO is poor reducing agent than carbon (4) All of these  
**Ans. (3)**