# CHEMISTRY

## BOOKS - MHTCET PREVIOUS YEAR PAPERS AND PRACTICE PAPERS

## GENERAL PRINCIPLES AND PROCESSES OF ISOLATION OF ELEMENTS

### Exercise 1

**1.** The ore of aluminium is

A. carnallite

B. malachite

C. galena

D. bauxite

**Answer: D**

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**2.** The formula of malachite ore is

A. $Fe_3O_4$

B. $MnO_2$

C. NiAs

D. $Cu(OH)_2 \cdot CuCO_3$

**Answer: D**

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**3.** Azurite is an ore of

A. gold

B. silver

C. copper

D. zinc

**Answer: C**

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**4.** Which of the following is an oxide ore ?

A. Malachite

B. Haematite

C. Copper glance

D. Zinc blende

**Answer: B**

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**5.** Which of the following ores does not contain iron ?

A. Limonite

B. Siderite

C. Carnallite

D. Chalcopyrites

**Answer: C**

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**6.** Which one of the following does not occurs as sulphide ore

A. Zn

B. Cr

C. Ag

D. Fe

**Answer: B**

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**7.** Calamine is an ore of

A. zinc

B. aluminium

C. iron

D. copper

**Answer: A**

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**8.** Cerussite is an ore of

A. Na

B. Cu

C. Pb

D. Fe

**Answer: C**

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**9.** The second most abundant metal in earth\'s crust is

A. aluminium

B. zinc

C. iron

D. copper

**Answer: C**

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**10.** Chalcopyrites is an ore of

A. gallium

B. copper

C. calcium

D. magnesium

**Answer: B**

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**11.** Which is not a mineral of aluminium?

A. Corundum

B. Anhydrite

C. Diaspore

D. Bauxite

**Answer: B**

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**12.** Which of the following is a carbonate ore?

A. Pyrolusite

B. Diaspore

C. Cassiterite

D. Malachite

**Answer: D**

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**13.** Shalerite and siderite are the ores of the metals

A. Cu and Fe

B. Zn and Cu

C. Zn and Fe

D. Zn and Al

**Answer: C**

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**14.** Which ore contains both iron and copper?

A. Cuprite

B. Chalcocite

C. Chalcopyrite

D. Malachite

**Answer: C**

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**15.** Which of the following metal is purified by Mond carbonyl method ?

A. Ti

B. Zr

C. Ge

D. Ni

**Answer: D**

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**16.** Which among the following metals is refined by electrolytic method ?

A. aluminium

B. Bismuth

C. Tin

D. Lead

**Answer: A**

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**17.** Froth floatation process is used for the metallurgy of

A. chloride ores

B. amalgams

C. oxide ores

D. sulphide ores

**Answer: D**

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**18.** The process of converting hydrated alumina into anhydrous alumina is called

A. roasting

B. smelting

C. dressing

D. calcination

**Answer: D**

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**19.** Autoreduction process is used in the extraction of

A. Cu and Hg

B. Zn and Hg

C. Cu and Al

D. Fe and Pb

**Answer: A**

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**20.** $NaCN$ is sometimes added in the froth flotation process as a depressant when $ZnS$ and $PbS$ minerals are expected because :

A. ZnS from soluble comple $Na_2\left[Zn(CN)_4\right]$ while PbS forms froth

B. $Pb(CN)_2$ is precipitated while no effect on ZnS

C. PbS forms soluble complex $Na_2[Pb(CN)_4]$ while ZnS forms froth

D. NaCN is never added in froth floatation process

**Answer: A**

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**21.** Which of the following pairs of metals uis purified by van arkel method?

A. Ni and Fe

B. Ga and In

C. Zr and Ti

D. Ag and Au

**Answer: C**

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**22.** Gravity separation process may be used for the concentration of:

A. calamine

B. haematite

C. Chalcopyrite

D. bauxite

**Answer: B**

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**23.** In zone-refining methode the molten zone

A. contains impurities

B. contains purified metal only

C. contains more impurity than the original metal

D. moves to either side

**Answer: C**

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**24.** The ore that is concentrated by froth floatation process is

A. cinnabar

B. bauxite

C. malachite

D. zincite

**Answer: A**

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**25.** The incorrect statement among the following is

A. Hydrogen is used to reduce NiO

B. Zirconium is refined by van-Arkel method

C. The sulphide ore galena is concentrated by froth floatation

D. In the metallurgy of iron , the flux used in $SiO_2$

**Answer: D**

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**26.** The method not used in metallurgy to refine impure metal is :

A. Mond's process

B. van-Arkel process

C. amalgamation process

D. liquation

**Answer: C**

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**27.** The metallurgical process in which a metal is obtained in a fused state is called

A. smelting

B. roasting

C. calcination

D. froth floatation

**Answer: A**

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**28.** In the alumino-thermite process, Al acts as :

A. flux

B. oxidising agent

C. reducing agent

D. solder

**Answer: C**

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**29.** Copper pyrites ore is concentrated by

A. electromagnetic method

B. gravity method

C. froth floatation process

D. All of the above

**Answer: A**

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**30.** Which of the following sulphides when heated strongly in air gives the corresponding metal?

A. $Cu_2S$

B. $CuS$

C. $Fe_2S_3$

D. $HgS$

**Answer: D**

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**31.** Which of the following metal can not be extracted by smelting process

A. Zn

B. Al

C. Pb

D. Fe

**Answer: B**

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**32.** In electrorefining of copper,some gold is deposited as

A. anode mud

B. cathode mud

C. cathode

D. electrolyte

**Answer: A**

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**33.** Aluminothermic process is used for metallurgy of

A. Pb

B. Ag

C. Al

D. None of these

**Answer: D**

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**34.** Which one of the following reactions is an example of auto-reduction?

A. $Fe_2O_4 \rightarrow 3Fe + 4CO_2$

B. $Cu_2O + C \rightarrow 2Cu + CO$

C. $Cu^{2+}(aq) + Fe(s) \rightarrow Cu(s) + Fe^{2+}(aq)$

D. $Cu_2O + \frac{1}{2}Cu_2S \rightarrow 3Cu + \frac{1}{2}SO_2$

**Answer: D**

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**35.** Which of the following metal is obtained by electrolytic reduction process ?

A. Fe

B. Cu

C. Ag

D. Al

**Answer: D**

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**36.** Chemical used as a depressant in separatin ZnS from PbS in froth-floatation process , is

A. NaCN

B. NaCl

C. $BaCl_2$

D. $ZnSO_4$

**Answer: A**

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**37.** Which of the following ores is not concentrated by froth floatation process?

A. Pyrolusite

B. Pentlandite

C. Zinc blende

D. Copper pyrites

**Answer: A**

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**38.** How do we separate two sulphide ores by froth floatation method?

A. By adding pine oil

B. By adding sodium cyanide

C. By adding foaming agent

D. By passing air

**Answer: B**

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**39.** Froth floatation process for the concentration of ores is an illustration of the pratical application of _____.

A. adsorption

B. sedimentation

C. coagulation

D. absorption

**Answer: A**

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**40.** The method of concentrating the ore which makes use of the difference in density between ore and impurities is called

A. leaching

B. liquation

C. levigation

D. magnetic separation

**Answer: C**

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**41.** In froth floatation method , the role of collectors is

A. to enhance non-wettability of the mineral particles

B. to enhance wettability of the mineral particles

C. Both (a) and (b)

D. None of the above

**Answer: A**

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**42.** In the froth floatation process for the purification of minerals the particles float because

A. they are insoluble

B. their surface is preferentially wetted by oil

C. they are light

D. they bear an electrostatic charge

**Answer: B**

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**43.** Select the incorrect reduction process.

A. $2\left[Ag(CN)_2\right]^- + Zn \rightarrow \left[Zn(CN)_4\right]^{2-} + 2Ag$

B. $CuO + H_2 \rightarrow Cu + H_2O$

C. $ZnO + H_2 \rightarrow Zn + H_2O$

D. $MgO + C \rightarrow Mg + CO$

**Answer: C**

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**44.** Which of the following process involves smelting ?

A. $Al_2O_3 \cdot 2H_2O \xrightarrow{\Delta} Al_2O_3 + 2H_2O$

B. $Fe_2O_3 + 3C \xrightarrow{\Delta} 2Fe + 3CO$

C. $ZnCO_3 \xrightarrow{\Delta} ZnO + CO_2$

D. $2PbS + 3O_2 \xrightarrow{\Delta} 2PbO + 2SO_2$

**Answer: B**

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**45.** Magnetite is concentrated by

A. gravity method

B. froth floatation process

C. electromagnetic method

D. All of the above

**Answer: C**

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**46.** The roasting reaction in the metallurgy of Cu is

A. $CuFeS_2 \rightarrow CuO + Fe_2O_3 + SO_2$

B. $2CuFeS_2 + O_2 \rightarrow Cu_2S + 2FeS + O_2$

C. $CuFeS_2 \rightarrow Cu_2O + Fe_2O_3 + SO_2$

D. None of the above

**Answer: B**

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**47.** Bauxite ore is concentrated by

A. froth floatation

B. electromagnetic separation

C. chemical separation

D. hydraulic separation

**Answer: C**

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**48.** Which one of the following reactions is an example of auto-reduction?

A. $Fe_3O_4 + 4CO \rightarrow 3Fe + 4CO_2$

B. $Cu_2O + C \rightarrow 2Cu + CO$

C. $Cu^{2+}(aq) + Fe(s) \rightarrow Cu(s) + Fe^{2+}(aq)$

D. $Cu_2O + \frac{1}{2}Cu_2S \rightarrow 3Cu + \frac{1}{2}SO_2$

**Answer: D**

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**49.** In order to refine blister copper , it melts in a furnance and is stirred with green logs of wood . The purpose is

A. to expel the dissoved gases in blister copper

B. to bring the impurities to surface and oxidise them

C. to increase the carbon content of copper

D. to reduce the metallic oxide impurities with hydrocarbon gases liberated from the wood

**Answer: D**

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**50.** In the extraction of Cu from its sulphide ore, the metal is formed by reduction of $Cu_2O$ with

A. FeS

B. CO

C. $Cu_2S$

D. $SO_2$

**Answer: C**

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**51.** During the process of electrolyic refining of copper some metals present as impurity settle as anode mud. These are

A. Fe and Ni

B. Ag and Au

C. Pb and Zn

D. Se and Ag

**Answer: B**

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**52.** Aluminium is extracted from Alumina ( $Al_2O_3$ ) by electrolysis of a molten mixture of

A. $Al_2O_3 + HF + NaAlF_4$

B. $Al_2O_3 + CaF_2 + NaAlF_4$

C. $Al_2O_3 + Na_3AlF_6 + CaF_2$

D. $Al_2O_3 + KF + Na_3AlF_6$

**Answer: C**

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**53.** which of the following electronts is present as the impurity to the maximum extent in the pig iron?

A. Phosphorus

B. Manganese

C. Carbon

D. Silicon

**Answer: C**

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**54.** In the electrolytic refining of zinc,

A. grahite is at the anode

B. the pure metal is at the cathode

C. the metal ion gets reduced at the anode

D. acidified zinc sulphate is the electrolyte

**Answer: B**

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**55.** Purest form of commercial iron is :

A. Cast iron

B. Steel

C. Wrought iron

D. Pig iron

**Answer: C**

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**56.** One of the following metals froms a volatile corbony1 compound and this property is taken advantage of its extraction. This metal is

A. iron

B. nickel

C. cobalt

D. tungsten

**Answer: B**

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**57.** The temperature of the slag zone in the metallurgy of iron using blast furnace is

A. $1500 - 1600^\circ C$

B. $400 - 700C^\circ$

C. $800 - 1000^\circ C$

D. $1200 - 1500^\circ C$

**Answer: C**

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**58.** Which one of the following metals is extracted by a carbon reduction process ?

A. Sodium

B. Iron

C. Aluminium

D. Magnesium

**Answer: B**

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**59.** Blister copper is

A. impure Cu

B. Cu alloy

C. pure Cu

D. Cu having 1% impurity

**Answer: D**

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**60.** Which one of the following metal , is extraced on smelting of its ore in blast furnance ?

A. iron

B. Sodium

C. Potassium

D. magnesium

**Answer: A**

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**61.** Which of the following metal can be obtained by the electrolysis of the aqueous solution of their salts ?

A. Cu

B. Na

C. Mg

D. K

**Answer: A**

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**62.** The percentage of carbon in cast iron is

A. $5 - 10$

B. $0.250 - 2.5$

C. $2.5 - 4.5$

D. $0.12 - 0.2$

**Answer: C**

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**63.** In the electrolysis of alumina , cryolite and $CaF_2$ are added to

A. increase the emf of cell

B. decrease the emf of cell

C. decrease the melting point

D. Both (b) and (c)

**Answer: C**

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**64.** The method used for prepare steel is

A. Bessemer's convertor method

B. Siemen's Martin process

C. Siemen's electric arc furnance

D. All of the above

**Answer: D**

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**65.** In the extractionof iron, slag is produced. Slag is

A. CO

B. $FeSiO_3$

C. $MgSiO_3$

D. $CaSiO_3$

**Answer: B**

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**66.** In electrorefining of copper,some gold is deposited as

A. cathode

B. electrode

C. cathode mud

D. anode mud

**Answer: D**

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**67.** Identify the reaction that does not take place during the smelting process of copper extraction

A. $2FeS + 3O_2 \rightarrow 2FeO + 2SO_2 \uparrow$

B. $Cu_2O + FeS \rightarrow Cu_2S + FeO$

C. $2Cu_2S + 3O_2 \rightarrow 2Cu_2O + 2SO_2 \uparrow$

D. $FeO + SiO_2 \rightarrow FeSiO_3$

**Answer: A**

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**68.** When copper ore is mixed with silica in a reverberatory furnace, copper matte is produced. The copper matter contains_____

A. sulphide of copper (II) and iron (II)

B. sulphide of copper (II) and iron (III)

C. sulphide of copper (I) and iron (II)

D. sulphide of copper (I) and iron (III)

**Answer: C**

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**69.** Extraction of zinc from zinc blende is achieved by:

A. electrolytic reduction

B. roasting followed by reduction with carbon

C. roasting followed by reduction with another metal

D. roasting followed by self reduction

**Answer: B**

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**70.** Elecyroltic refining is used to purify which of the following metals?

A. Cu and Zn

B. Ge and Si

C. Zr and Ti

D. Zn and Hg

**Answer: A**

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**71.** Which of the following metals is extracted by the electrometallurgical method?

A. Cu

B. Fe

C. Na

D. Ag

**Answer: B**

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**72.** In the metallurgy of Fe, when $CaCo_3$ is added to blast furnace, calcicum ion appears as

A. slag

B. gangue

C. CaO

D. metallic Ca

**Answer: A**

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**73.** Haematite is reduced in a blast furnance by

A. CO

B. $CO_2$

C. $SO_2$

D. $C$

**Answer: A**

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**74.** In blast furnace, the highest temperature is in

A. zone of fusion

B. zone of combustion

C. zone of slag combustion

D. zone of reduction

**Answer: B**

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**75.** In the modern blast furnances, the charge consists of a mixture of

A. iron pyrites + bituminous coal

B. hydrated iron oxides + dolomite + coke

C. calcined iron oxide + limstone + coke

D. calcined iron oxide + lime + anthracite coal

**Answer: A**

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**76.** The common method of extraction of metals from oxide ores is

A. reduction of Al

B. reduction with H

C. reduction with C

D. None of these

**Answer: C**

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**77.** What is the role of graphite rod in the electrometallurgy of aluminium?

A. It acts as anode

B. It acts as cathode

C. It acts as oxidising agent

D. Both (a) and (c)

**Answer: A**

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## Exercise 2

**1.** Thermite is a mixture of :

A. Fe powder and $Al_2O_3$

B. Al powder and $Fe_2O_3$

C. Cu powder and $Fe_2O_3$

D. Zn powder and $Cr_2O_3$

**Answer: B**

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**2.** Which of the following statement is incorrect ?

A. Electrostatic separation is used for lead sulphide

B. Galena is an ore of Pb

C. Ore is heated strongly above its melting point in roasting

D. Silica acts as acidic flux

**Answer: C**

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**3.** Sulphide ores of metals are usually concentrated by both floatation process. Which of the following sulphide ores offers an exception and is concentrated by chemical leaching ?

A. Argentite

B. Galena

C. Copper pyrite

D. Sphalerite

**Answer: D**

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**4.** The fluorspar $(CaF_2)$ is added in small quantities in the electrolytic reduction of alumina dissolved in fused cryolite $(Na_3AlF_6)$ . The role of fluorspar is/are

I. to decrease the rate of oxidation of carbon at anode .

II. to act as a catalyst .

III. to lower the temperature of the melt .

IV. to make the fused mixture very conducting .

Choose the correct statement(s).

A. I and II

B. II and III

C. I and IV

D. III and IV

**Answer: A**

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**5.** In the equation:

$M + 8CN^- + 2H_2O + O_2 \rightarrow 4\left[M(CN)_2\right]^- + 4OH^-$ metal

M is:

A. Copper

B. Iron

C. Gold

D. Zinc

**Answer: C**

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**6.** Match the following .

The correct answer is

A. A-IV, B-V, C-II,D-I

B. A-IV, B-V, C-I, D-II

C. A-IV, B-I, C-III, D-II

D. A-II, B-V, C-IV, D-I

**Answer: B**

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**7.** Bell metal is an alloy of

A. Cu(80%), Zn(20%)

B. Cu(60%), Ni(40%)

C. Cu(90%), Sn(10%)

D. Cu(80%),Sn(20%)

**Answer: D**

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**8.** Specific gravity of slag is

A. always less than molten metal

B. always higher than molten metal

C. same as that of molten metal

D. None of the above

**Answer: A**

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**9.** Match the following Columns and choose the correct option from the codes given below.

A. A-2,B-4,C-1,D-3

B. A-3,B-4,C-2,D-1

C. A-1,B-2,C-3,D-4

D. A-4,B-1,C-3,D-2

**Answer: A**

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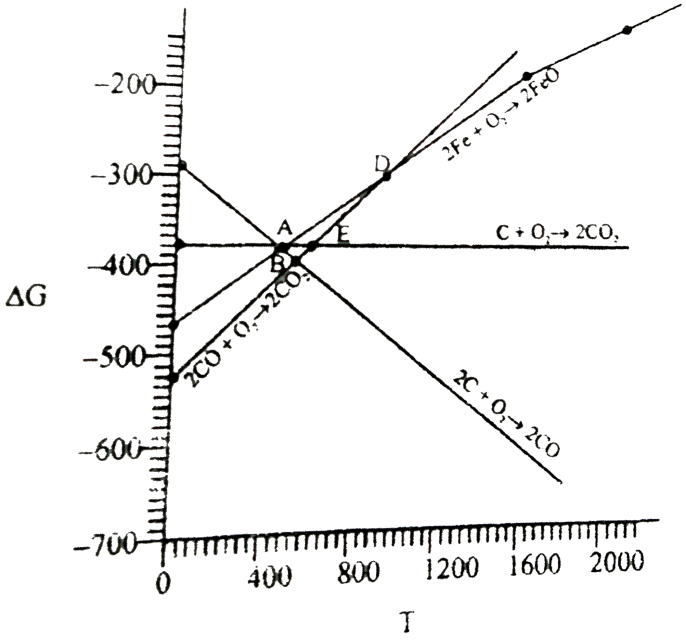
**10.** For the reduction of $FeO$ at the temperature corresponding to point D, which of the following statements is correct?




A. $\Delta G$ value for the overall reduction reaction with carbon monoxide is zero

B. $\Delta G$ value for the overall reduction reaction with a mixture of 1 mole carbon and 1 mole oxygen is positive

C. $\Delta G$ value for the overall reduction reaction with a mixture of 2 mole carbon and 1 mole oxygen is positive

D. $\Delta G$ value for the overall reduction reaction with carbon monoxide is negative

**Answer: A**

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**11.** Which of the following statement(s) is/are incorrect ?

I. Zinc can be extracted by self-reduction.

II. A depressant prevents certain type of particel of come in the froth .

III. Copper matte contains ZnS and $Cu_2S$.

IV. The solidified copper obtained from reverberatory furnance has blistered appearance due to evolution of $SO_2$ during the

extraction .

The option containing incorrect statements is

A. I and II

B. II and IV

C. I and IV

D. II and III

**Answer: C**

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**12.** Match Column I with Column II and select the correct answer using the codes given below the list .

A. 1-B, 2-A,3-C,4-D

B. 1-B,2-C,3-A,4-B

C. 1-C,2-A,3-B,4-D

D. 1-C,2-D,3-A,4-B

**Answer: D**

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**13.** Consider the following reaction at $1000^\circ C$

(A) $Zn(s) + \frac{1}{2}O_2(g) \rightarrow ZnO(s), \Delta G^\Theta = -360kJmol^{-1}$

(B) $C(s) + \frac{1}{2}O_2(g) \rightarrow OO(g), \Delta G^\Theta = -460kJmol^{-1}$

Choose the correct statement at $1000^\circ C$

A. Zinc can be oxidised by carbon monoxide

B. Zinc oxide can be reduced by graphite

C. Both statement (a) and (b) are true

D. Both statement (a) and (b) are false

**Answer: B**

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**14.** In $Mac$ Arthur Forest method, silver is extracted from the solution of $Na\left[Ag(CN)_2\right]$ by the use of

A. Fe

B. Mg

C. Cu

D. Zn

**Answer: D**

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**15.** Which method of purification is represented by the following equations

$$Ti + 2I_2 \xrightarrow{523K} TiI_4 \xrightarrow{1700K} Ti + 2I_2$$

A. Cupellation

B. Poling

C. Electrolytic refining

D. van-Arkel process

**Answer: D**

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**16.** In aluminium extraction by Bayer process, alumina is extracted from bauxite by sodium hydroxide at high temperatures and pressures

$Al_2O_3(s) + 2OH^- \rightarrow 2Al_2O_2^-(aq) + H_2O(l)$

Solid impurities such as $Fe_2O_3$ and $SiO_2$ are removed and then $Al(OH)_4^-$ is reprecipitated

$2Al(OH)_4^- \rightarrow Al_2O_{3.3}H_2O(g) + 2OH^-(aq)$

In the industrical world :

A. carbon dioxide is added to precipitate the alumina

B. temperature and pressure are dropped and the supersaturated solution seeded

C. Both (a) and (b) are practised

D. the water is evaporated

**Answer: C**

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**17.** Which of the following statement is incorrect?

A. Pure aluminium oxide is obtained by heating aluminium hydroxide

B. Cryolite lowers down the melting temperature of bauxite in the electrolytic cell for extraction of aluminium

C. Carbonate ores are converted into oxides by roasting the ore in air

D. Mercury cannot be produced by roasting the ore of cinnabar in air

**Answer: C**

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**18.** Match the following Columns and choose the correct option from the codes given below.

A. A-4,B-3,C-1,D-2

B. A-3, B-4,C-2,D-1

C. A-2,B-1,C-3,D-4

D. A-1,B-2,C-4,D-3

**Answer: B**

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**19.** Aluminothermic process is used for the extraction of metals, whose oxides are

A. easily reduced by carbon

B. not easily reduced by hydrogen

C. fusible

D. strongly basic

**Answer: A**

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**20.** Match the column I and column II and pick the correct matching from the codes given below.

A. A-1 ,B-3,C-4,D-5,E-2

B. A-1,B-3,C-4,D-2,E-5

C. A-4,B-5,C-2,D-1,E-3

D. A-1,B-3,C-5,D-2,E-4

**Answer: D**

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**21.** To obtain pure germanium which of the following methods of refining is preferred?

A. Liquation

B. Zone- refining

C. Electrolytic method

D. Poling

**Answer: B**

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**22.** Which one of the following statement is false ?

A. During roasting , moisture is removed from the ore

B. The ore is free from almost all non-metallic impurities

C. Calcination of ore is carried out in the absence of any blast of air

D. The concentrated zinc blende is subjected to calcination during the extraction by pyrometallurgy

**Answer: D**

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**23.** Cabon cannot reduce $Fe_2O_3$ to Fe at a temperature below 983K because.

A. free energy change for the formation of CO is more negative than that of $Fe_2O_3$

B. CO is thermodynamically more stable than $Fe_2O_3$

C. carbon has higher affinity towards oxygen than iron

D. iron has higher affinity towards oxgen than carbon

**Answer: D**

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**24.** Cassiterite is an ore of I... and is concentrated by II.... method . Here ,I and II refer to

A. II $\rightarrow$ levigation , I $\rightarrow$ Sn

B. II $\rightarrow$ froth floatation , I $\rightarrow$ Ni

C. II $\rightarrow$ electromagnetic separation , I $\rightarrow$ Sn

D. II $\rightarrow$ liquefaction , I $\rightarrow$ Ni

**Answer: C**

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**25.** In the isolation of metals, reaction proces susually results in

A. metal sulphide

B. metal carbonate

C. metal hydroxide

D. metal oxide

**Answer: D**

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**26.** Gravity separation method is based upon:

A. difference in densities of ore particles and impurities

B. difference in chemical properties of ore particles and impurities

C. preferential washing of ores and gangue particles

D. None of the above

**Answer: A**

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**27.** Hydro-metallurgical process of extraction of metals is based on

A. complex formation

B. hydrolysis

C. dehydration

D. dehydrogenation

**Answer: A**

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**28.**

$$(Ag+Pb)alloy \xrightarrow{\text{Melt and add zinc}} (Ag+Pb+Zn)\text{melt} \xrightarrow{\text{Cool}} \frac{LayerX}{LayerY}$$

Select correct statements based on above scheme:

A. Layer X contains Zn and Ag

B. Layer Y contains Pb and Ag but amount of silver in this layer is smaller than in layer X

C. X and Y are immiscible layer

D. All of the above are correct statements .

**Answer: D**

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**29.** Purest form of commercial iron is :

A. Steel

B. Wrought iron

C. Grey cast iron

D. White cast iron

**Answer: B**

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Mht Cet Corner

**1.** Name the reagent that is used in leaching of gold .

A. Carbon

B. Sodium cyanide

C. Carbon monoxide

D. Iodine

**Answer: B**

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**2.** Which metal is refined by Mond's process?

A. Titanium

B. Copper

C. Nickel

D. Zinc

**Answer: C**

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**3.** The most abundant element in the earth crust is

A. Hydrogen

B. Nitrogen

C. Oxygen

D. Silicon

**Answer: C**

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**4.** Which among the following alloys is used in making instruments for electrical measurements ?

A. Stainless steel

B. Manganin

C. Spiegeleisen

D. Duralumin

**Answer: B**

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**5.** What is the chemical composition of Nicol prism ?

A. $Al_2O_3$

B. $CaSO_4$

C. $CaCO_3$

D. $Na_3AlF_6$

**Answer: C**

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**6.** Name the metal that is purified by placing the impure metal on sloping hearth of a reverberatory furnance and heating that above its melting point in the absence of air .

A. Mercury

B. Galium

C. Zirconium

D. Copper

**Answer: D**

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**7.** How is ore of aluminium concentrated ?

A. roasting

B. Leaching

C. Froth floatation

D. Using Wilfley table

**Answer: B**

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**8.** Which among the following metals is refined by electrolytic method ?

A. aluminium

B. Bismuth

C. Tin

D. Lead

**Answer: A**

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**9.** Which of the following is not an iron ore ?

A. Malachite

B. haematite

C. Siderite

D. Limonite

**Answer: A**

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**10.** Willemite is

A. $Zn_2SiO_4$

B. $H_2PtCl_6$

C. ZnO

D. $ZnOFe_2O_3$

**Answer: A**

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**11.** Calamine is

A. $CaCO_3$

B. $MgCO_3$

C. $ZnCO_3$

D. $CaCO_3 + CaO$

**Answer: C**

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**12.** The purest zinc is made by

A. electrolytic refining

B. zone refining

C. the van-Arkel method

D. the Mond process

**Answer: A**

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**13.** Carborundum is the commercial name of

A. SiC

B. $Al_2O_3 \cdot H_2O$

C. $Al_2(SO_4)_3$

D. $AlCl_3$

**Answer: A**

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**14.** Apatite is an ore of

A. fluorine

B. chlorine

C. bromine

D. iodine

**Answer: A**

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