

Exercise # 1

- Q.1** The metallic luster of sodium can be explained –
[1] By diffusion of sodium ion [2] By oscillation of loose electrons
[3] By excitation of free protons [4] By body centred cubic lattice
- Q.2** The structure of alkali metals is generally
[1] hcp [2] fcc [3] bcc [4] None of these
- Q.3** Ignite mixture in thermite process is
[1] Fe + Al powder [2] BaO₂ + Mg powder
[3] Cr + Al powder [4] Fe₂O₃ + Mg powder
- Q.4** Froth flotation process is used in the concentration of following type of ore –
[1] Carbonate ore [2] Oxide ore [3] Sulphide ore [4] Phosphate ore
- Q.5** The purpose of smelting of an ore is
[1] to oxidise it [2] to reduce it
[3] To remove volatile impurities from it [4] to obtain an alloy
- Q.6** If steel is heated to redness and is suddenly quenched by plunging into water or oil, it becomes -
[1] Hard and ductile [2] Soft and ductile [3] Soft and brittle [4] Hard and brittle
- Q.7** Steel is heated to redness and then allowed to cool slowly. This process is called
[1] Hardening [2] Tempering [3] Annealing [4] Brittleness
- Q.8** Gun metal is an alloy of -
[1] Cr and Al [2] Cu, Sn and Zn [3] Cu, Zn and Ni [4] Cu and Sn
- Q.9** Bauxite is purified by
[1] Hall's method [2] Baeyer's method [3] Both of the above [4] None of these
- Q.10** If the impurity of silica in bauxite is comparatively more, then it is purified by
[1] Hall's method [2] Baeyer's method [3] Serpek's process [4] Pattinson's process
- Q.11** Metallic bond is
[1] An ionic bond [2] A covalent bond
[3] inter atomic forces between metal atoms [4] None of these
- Q.12** Mercury is purified -
[1] By converting into solid state [2] By vacuum distillation
[3] By the reaction with dil HNO₃ [4] By electrolysis
- Q.13** The silver obtained from argentiferrous lead, is purified by
[1] Distillation [2] Froth flotation method
[3] Cupellation [4] Reaction with KCN
- Q.14** In aluminio thermite process, aluminium acts as-
[1] An oxidant [2] A flux [3] A reductant [4] A solder
- Q.15** In the production of silver metal from argentite. ore -
[1] A mixture of fused Ag₂S and KCl is electrolysed .
[2] Ag₂S is reduced by CO
[3] Ag₂S is roasted to Ag₂O and then Ag₂O is reduced with carbon
[4] Ag₂S is treated with NaCN solution and then metal is replaced by Zn
- Q.16** The inner lining of a blast furnace is made of -
[1] Graphite bricks [2] Silica bricks
[3] Fire clay bricks [4] Alkaline bricks

- Q.17** Which of the following ores is concentrated .by froth flotation method -
[1] Bauxite ore [2] Haematite ore [3] Cryolite ore [4] Sulphide ore
- Q.18** Most abundant element in earth's crust is-
[1] Hydrogen [2] Oxygen [3] Silicon [4] Carbon
- Q.19** Iron reacts with carbon to give
[1] FeC [2] Fe₃C [3] FeC₂ [4] FeC₃
- Q.20** The most stable oxidation state of iron is
[1] + 2 [2] + 3 [3] - 2 [4] - 3
- Q.21** The following process is necessary to obtain purest form of copper metal
[1] Carbon reduction [2] Hydrogen reduction [3] Electrolytic process [4] Thermite process
- Q.22** The following metal can be extracted by Bayer's method
[1] Mg [2] Fe [3] Cu [4] Al
- Q.23** The substance mixed for the removal of . impurities from ores is called
[1] Slag [2] Gangue [3] Flux [4] Catalyst
- Q.24** Which of the following in a correct statement?
[1] Malachite is an ore of copper [2] Azurite is an ore of copper
[3] Both of the above [4] None of these
- Q.25** Which of the following is not a correct statement?
[1] Malachite is a carbonate ore [2] Azurite is carbonate ore
[3] Both ores are of copper [4] Malachite and azurite both are oxide ores
- Q.26** Formula of bauxite is
[1] Al₂O₃ [2] Al₂O₃.H₂O [3] Al₂O₃.2H₂O [4] Al₂O₃.3H₂O
- Q.27** Mercury does not form amalgam with
[1] Al [2] Zn [3] Ni [4] Fe
- Q.28** Which of the following is an ore of iron?
[1] Haematite [2] Kieselite [3] Malachite [4] None of these
- Q.29** The purest form of iron is
[1] White cast iron [2] Grey cast iron [3] Wrought iron [4] Steel
- Q.30** Which of the following is not a property of metals?
[1] Metals are transparent [2] Metals can be beaten to sheets
[3] Metals have crystalline structure [4] Metals are good conductors of heat.
- Q.31** Smelting is a process in which
[1] Ore is heated in presence of air [2] Ore is cooled
[3] Ore is heated in absence of air [4] Ore is melted
- Q.32** In the electrorefining of metal its aqueous salt solution is electrolysed. Impure metal is taken as anode and pure metal as cathode. This method can not be used for refining of -
[1] Silver [2] Copper [3] Aluminium [4] Zinc
- Q.33** Sulphide ore is generally concentrated by
[1] Froth flotation method [2] Magnetic separation [3] Gravity separation [4] by caching with hand
- Q.34** For the purification of bauxite by Hall's method, it is
[1] Heated with NaOH [2] Fused with Na₂CO₃ [3] Both of the above [4] None of the above
- Q.35** The substance which forms fusible matter by reacting with gangue, is called
[1] Flux [2] Catalyst [3] Ore [4] Glassy slag
- Q.36** Zinc plating is
[1] Deposition of Zn over Fe [2] Deposition of Al over Fe
[3] Deposition of Sn over Fe [4] Deposition of Cu over Fe

- Q.37** The formula for felspar is
[1] KAlSi_3O_8 [2] Al_2O_3 [3] Na_3AlF_6 [4] $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$
- Q.38** For obtaining silver from horn silver, it is-
[1] Boiled with caustic soda and glucose [2] reacted with $\text{Zn} + \text{H}_2\text{SO}_4$
[3] Both of the above [4] None of these
- Q.39** The purest form of commercial iron is
[1] Pig iron [2] Cast iron [3] Wrought iron [4] steel
- Q.40** The product formed when AgCl is fused with Na_2CO_3 is
[1] Ag_2CO_3 [2] Silver carbide [3] Ag [4] Ag_2O
- Q.41** In blast furnace, iron oxide is reduced with
[1] silica [2] by CO [3] By carbon [4] by lime stone
- Q.42** The natural substance from which metal is extracted economically is called
[1] Mineral [2] Ore [3] Compound [4] Salt
- Q.43** Which of the following is a true statement?
[1] Metallic bond is directional
[2] Metallic bond is localised between, two atoms
[3] Metallic bond is similar to ionic bond.
[4] Metallic bond can explain the properties of metals like malleability and ductility.
- Q.44** Which has the highest percentage of carbon?
[1] Wrought iron [2] Soft steel [3] Mild steel [4] Hard steel
- Q.45** Iron becomes inactive if it is treated with
[1] Conc. H_2SO_4 [2] Cone. HCl [3] Conc. H_3PO_4 [4] Conc. HNO_3
- Q.46** Bronze is an alloy of
[1] Cu and Mn [2] Cu and Zn [3] Cu and Sn [4] Cu and Al
- Q.47** Which of the following is not an ore of silver?
[1] Ruby silver [2] Horn silver [3] German silver [4] Argentite
- Q.48** White vitriol is
[1] $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ [2] $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ [3] $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ [4] $\text{CoSO}_4 \cdot 7\text{H}_2\text{O}$
- Q.49** The thin layer of which of the following is deposited in galvanised iron
[1] Tin [2] Zinc [3] Aluminium [4] White lead,
- Q.50** German silver is
[1] AgCl [2] Alloy of Cu, Zn and Ni
[3] Alloy of Cu, Zn and Sn [4] None of these
- Q.51** Which of the following ores can be concentrated by magnetic separation method?
[1] Galena [2] Haematite [3] Argentite [4] Sedarite
- Q.52** The purest form of iron is
[1] Pig iron [2] Wrought iron [3] Cast iron [4] Soft ispat
- Q.53** Lime stone ore on heating gives carbon dioxide. This process in metallurgy is called
[1] Smelting [2] Ore dressing [3] Calcination [4] Roasting
- Q.54** In calcination
[1] Ore is oxidised in the presence of air.
[2] Ore is heated in the absence of air below its melting point
[3] Ore is reduced with carbon
[4] None of these

- Q.55** The mixture of $\text{Na}_3\text{AlF}_6 + \text{CaF}_2$ is mixed in electrolytic reduction of alumina
 [1] To make alumina soluble
 [2] To decrease the electrical conductivity and increase the melting point
 [3] To increase the electrical conductivity and decrease -the melting. point
 [4] None of these
- Q.56** Which of the following is useful for obtaining silver metal?
 [1] Parkes process [2] Froth flotation method
 [3] Carbon reduction [4] Magnetic separation
- Q.57** Which of the following is not an alkaline flux?
 [1] CaCO_3 [2] Lime [3] SiO_2 [4] CaO
- Q.58** In the extraction of which of the following a complex is formed?
 [1] Na [2] Cu [3] Ag [4] Fe
- Q.59** Those substances which form fusible matter by reacting with matrix are called
 [1] Flux [2] Catalysts [3] Ores [4] slags
- Q.60** Heating pyrites in air to remove sulphur is known as
 [1] Roasting [2] Calcination [3] Smelting [4] formation of slag
- Q.61** Which of the following is formed by the reaction of copper with concentrated and hot sulphuric acid-
 [1] SO_2 [2] SO_3 [3] H_2 [4] Cu^+ ions
- Q.62** Argentite is an ore of
 [1] Cu [2] Ag [3] Pt [4] Au
- Q.63** The percentage of nickel in nickel iron is
 [1] 1.5% [2] 3.5% [3] 6.5% [4] 8.5%
- Q.64** Glauber's salt is
 [1] $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ [2] $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ [3] $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ [4] $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$
- Q.65** Which of the following is a correct statement?
 [1] Bauxite is an ore of copper [2] Haematite is an ore of aluminium
 [3] Magnetite is an ore of iron [4] Argentite is an ore of aluminium
- Q.66** The compound which gives oxygen on normal heating is-
 [1] Ferric oxide [2] Zinc oxide [3] Mercuric oxide [4] Aluminium oxide
- Q.67** In the nitriding process of ispat
 [1] Ispat is heated in an atmosphere of ammonia
 [2] Ispat is heated to redness and then allowed to cool.
 [3] Ispat is heated to redness and then cooled by plunging into oil
 [4] None of these
- Q.68** The method used for the concentration of an ore is-
 [1] Froth flotation method [2] Roasting
 [3] Electrolysis [4] Bessemerisation
- Q.69** Brass is -
 [1] A compound [2] An amalgam [3] an element [4] An alloy
- Q.70** The main constituents of steel made in india are -
 [1] Mn and Cr [2] Al and Zn [3] V and Co [4] Ni and Mg
- Q.71** Aluminothermite process. is used for the extraction of those metals, the oxides of which
 [1] Are fusible [2] can not be reduced by carbon easily
 [3] Can not be reduced by hydrogen easily [4] Are strongly basic

- Q.72** Aluminium is refined by
 [1] Baeyer's process [2] Serpek process [3] Hoopé's method [4] None of these
- Q.73** The electrolytic method of reduction is employed for the the extraction of metals that -
 [1] Are strongly electronegative. [2] Are strongly electropositive
 [3] Are transition metals [4] Are non metals
- Q.74** The permanent magnet can be made from
 [1] Cast iron [2] Steel [3] Wrought iron [4] All.of the above
- Q.75** Smelting is done in -
 [1] Blast furnace [2] Muffle furnace [3] Open hearth furnace [4] Electric furnace
- Q.76** The main function of roasting is
 [1] Removal of volatile substance [2] Oxidation
 [3] Reduction [4] to make slag
- Q.77** Which of the following is not a correct statement?
 [1] Flux is used to remove impurities from metal
 [2] The nature of the flux depends upon the nature of impurities
 [3] Flux reduces the melting point of metal
 [4] the coke used in smelting acts asa reducing agent and fuel.
- Q.78** The anode mud obtained in the extraction of copper is
 [1] Cu + Ag [2] Cu + Ag + Au [3] Cu + Au [4] None of these
- Q.79** In the extraction of iron from iron oxide, limestone is added because it acts as
 [1] An oxidising agent [2] A reducing agent [3] A flux [4] A precipitant
- Q.80** In the industrial production of iron, lime stone is added. Calcium ions separate as
 [1] Slag [2] Gangue [3] Calcium [4] CaCO_3
- Q.81** Cupel is made up of
 [1] Silica [2] Magnesium [3] Bone ash [4] Litharge
- Q.82** Slags are generally
 [1] Silicates and Phosphates [2] Metallic oxides
 [3] Pure fused metal [4] Rocky stones
- Q.83** Pyrargyrite is
 [1] Silver glance [2] Horn silver [3] Ruby. silver [4] German silver
- Q.84** Which of the following metals is unable to replace hydrogen from acid?
 [1] Hg [2] Zn [3] Al [4] Ca
- Q.85** In concentration process of minerals by froth flotation method, the ore particles float because -
 [1] They are light [2] Their surface is hydrophobic
 [3] They bear electrostatic charge [4] They are insoluble.
- Q.86** Which of the following is not a correct match?
 (1) Microcosmic salt $\text{Na}(\text{NH}_4)\text{HPO}_4 \cdot 4\text{H}_2\text{O}$ [2] Hydrolith - CaH_2
 [3] Chromyl chloride - CrO_2Cl_2 [4] Chili salt petre - KNO_3
- Q.87** The formula of Kaolin is
 [1] KAISi_3O_8 [2] $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$
 [3] $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$ [4] Na_3AlF_6
- Q.88** The formula of haematite is
 [1] Fe_3O_4 [2] Fe_2O_3 [3] FeCO_3 [4] FeS_2
- Q.89** The correct order of stability of metal fluoride, chloride and oxide is
 [1] Fluoride> chloride> oxide [2] Fluoride> oxide> chloride
 [3] Oxide> chloride> fluoride [4] All have same stability

- Q.90** Bell metal is an alloy of
 [1] Cu + Sn [2] Cu + Al [3] Cu + Ni [4] Cu + Mn
- Q.91** Annealing is
 [1] The process in which steel is heated to redness and then cooled rapidly
 [2] The process in which steel is heated to redness and then allowed to cool slowly
 [3] The process in which hard steel is heated upto 270° C and then allowed to cool slowly
 [4] None of these
- Q.92** Coins of silver contain the impurity of
 [1] Copper [2] Tin [3] Zinc [4] Chromium
- Q.93** When a copper wire is dipped into a solution of AgNO_3 . The colour of the solution becomes blue. The reason is the
 [1] Formation of a soluble complex [2] Oxidation of copper
 [3] Oxidation of silver [4] Reduction of copper.
- Q.94** Iron can be extracted by the following process
 [1] Smelting process [2] Roasting
 [3] Aluminothermite process [4] Electrolytic reduction of fused iron oxide
- Q.95** Limonite is an ore of
 [1] copper [2] Silver [3] Aluminium [4] Iron
- Q.96** Powdered silver ore is mixed with NaCN solution, the product formed on passing air to this mixture is -
 [1] AgCN [2] Ag [3] $\text{Ag}(\text{CN})_2$ [4] $\text{Na}[\text{Ag}(\text{CN})_2]$
- Q.97** An alloy is an example of
 [1] Gel [2] Aerosol [3] Solid sol [4] Emulsion
- Q.98** Cyanide process is used in the extraction of
 [1] Cr [2] Ag [3] Cu [4] Zn
- Q.99** The ore of silver is -
 [1] Argentite [2] Bauxite [3] Malachite [4] Cuprite
- Q.100** Duralium is in alloy of
 [1] Cu and Mg [2] Cu, Mg and Mn [3] Cu and Mn [4] Mg and Mn

Answer Key - 1

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ans.	2	3	2	3	2	4	3	2	3	3	3	2	3	4	1	3	4	2	2	2	3	4	3	3	4
Qus.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ans.	3	3,4	1	3	1	4	3	1	2	1	1	1	3	3	3	2	2	4	4	4	3	3	2	2	2
Qus.	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	2	2	3	2	3	1	3	3	1	1	1	2	2	4	3	3	1	1	4	1	2	3	2	2	1
Qus.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ans.	2	3	2	3	1	3	1	3	1	2	4	2	2	2	1	2	1	2	1	4	4	3	2	1	2

Exercise # 2

- Q.1** The frothing agent in the following is
[1] Pine oil [2] Sodium amyl xanthate
[3] Gangue [4] Sulphide ore
- Q.2** The number of metallic bonds, from Cr to Ni.
[1] Decreases continuously [2] Increases continuously
[3] Remains same [4] None of these
- Q.3** CuSO_4 solution on reaction with KCN gives –
[1] $\text{Cu}(\text{CN})_2$ [2] $\text{Cu}(\text{CN})$ [3] $\text{K}_2[\text{Cu}(\text{CN})_4]$ [4] $\text{K}_3[\text{Cu}(\text{CN})_4]$
- Q.4** In the cyanide method of extraction of silver, silver ore is heated with
[1] Sodium cyanide solution [2] Silver cyanide solution
[3] Salt and roasted pyrite [4] None of these
- Q.5** In the Parkes process for the extraction of silver, molten zinc is mixed with molten argentiferous lead because
[1] Molten lead and zinc are insoluble in each other
[2] Silver is more soluble, in molten zinc as compared to lead
[3] Silver and zinc alloy solidifies readily on cooling
[4] All of the above
- Q.6** The formula of calamine is
[1] ZnS [2] ZnCO_3 [3] Ag_2CO_3 [4] Ag_2S
- Q.7** The process of calcination is carried out in case of following types of ores
[1] Hydroxide ores [2] Carbonate ores
[3] Hydroxide and Carbonate ores [4] Hydroxide and sulphide ores
- Q.8** Which of the following is a correct statement?
[1] A mineral can not be an ore [2] All the ores can not be minerals
[3] All the ores are minerals [4] All the minerals are ores
- Q.9** Which of the following ores is used in the industrial production of iron?
[1] Cryolite [2] Bauxite [3] Hematite [4] Chalcopryrite
- Q.10** Which of the following metal contains maximum number of metallic bonds?
[1] V [2] Ti [3] Sc [4] Ca
- Q.11** The total number of atoms present in a body central cubic unit cell is
[1] 2 [2] 8 [3] 1 [4] 12
- Q.12** Pig iron-
[1] Is the iron containing the carbon and other impurities [2] Is a pure form of iron
[3] Is similar to wrought iron [4] Is similar to steel
- Q.13** Refractory materials are used for the construction of furnaces because
[1] They are light in weight [2] They can withstand high temperature
[3] They are leak proof [4] They do not require to be replaced
- Q.14** The substance used in the reduction of metal ores in thermite process is
[1] Aluminium [2] Thorium [3] Hot platinum [4] Carbon
- Q.15** The blocks of automobile engines are made up of -
[1] Stainless steel [2] Nickel chromium steel [3] Cast iron [4] Wrought iron
- Q.16** Malachite is a mineral of
[1] Magnesium [2] Copper [3] Iron [4] Aluminium

- Q.17** Ferrous sulphate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$) is known as -
[1] Burmilon [2] Glauber's salt [3] Green vitriol [4] Mohr's salt
- Q.18** Cupellation is used in the extraction of the following metal-
[1] Copper [2] Silver [3] Aluminium [4] Iron
- Q.19** Crystalline metal can be transformed into metallic glass by
[1] Alloying [2] Pressing into thin plates
[3] Slow cooling of molten metal [4] Very rapid cooling of a spray of the molten metal
- Q.20** German silver is an alloy of Cu and
[1] Zn and Ni [2] Al [3] Zn [4] Sn
- Q.21** Froth flotation process is used in the concentration of the following
[1] Oxide ore [2] Sulphide ore [3] Chloride ore [4] None of these
- Q.22** After the partial roasting of sulphide ore of copper, the method of reduction is
[1] Carbon reduction [2] Electrolysis [3] Auto reduction [4] Cyanide method
- Q.23** An alloy is
[1] An intermetallic compound [2] A solid containing two or more metallic elements
[3] A solid containing a non metal [4] A solid containing more than one non metals
- Q.24** An example of halide ore is
[1] Galena. [2] Bauxite [3] Cryolite [4] Cinnabar
- Q.25** Froth flotation process for the concentration of ores is an example of
[1] Adsorption [2] Absorption [3] Coagulation [4] Sedimentation
- Q.26** If two compounds have the same crystal structures and analogous formula they are called -
[1] Isomorphous [2] Isotopes [3] Isomers [4] Isobars
- Q.27** Which ore of the following is corundum?
[1] SrO_2 [2] Al_2O_3 [3] CaCl_2 [4] Cu_2Cl_2
- Q.28** Which of the elements listed below occurs in allotropic forms?
[1] Iodine [2] Copper [3] Sulphur [4] silver
- Q.29** Which of the following flux is used to remove acidic impurities in metallurgical process?
[1] Silica [2] Sodium chloride [3] Lime stone [4] Radium carbonate
- Q.30** The cheap and having high melting point compound used in furnace is
[1] PbO [2] CaO [3] HgO [4] ZnO
- Q.31** Nilam is the mineral of
[1] Cu [2] Zn [3] Al [4] Bi
- Q.32** Matte is
[1] Pure Cu_2S [2] Cu_2S with the impurity of FeS
[3] A mixture of $\text{Cu}_2\text{S} + \text{FeSiO}_3$ [4] 99.8% pure copper
- Q.33** The blistered copper can be obtained from matte by the following process
[1] Poling [2] Smelting
[3] Bassemmerisation [4] Roasting
- Q.34** The common alum in the following is
[1] $\text{K}_2\text{SO}_4 \cdot \text{Al}_2(\text{SO}_4)_3 \cdot 24\text{H}_2\text{O}$ [2] $\text{K}_2\text{SO}_3 \cdot \text{Cr}_2(\text{SO}_4)_3 \cdot 24\text{H}_2\text{O}$
[3] $\text{K}_2\text{SO}_4 \cdot \text{Fe}_2(\text{SO}_4)_3 \cdot 24\text{H}_2\text{O}$ [4] $(\text{NH}_4)_2\text{SO}_4 \cdot \text{FeSO}_4 \cdot 6\text{H}_2\text{O}$
- Q.35** Which of the following is the best conductor of electricity?
[1] Iron [2] Copper [3] Silver [4] Zinc
- Q.36** Which of the following element is found in the body?
[1] Pb [2] Fe [3] Cd [4] Al

- Q.37** Which of the following contains only one element? .
[1] Marble [2] Sand [3] Diamond [4] Glass
- Q.38** White lead is
[1] PbCO_3 [2] $\text{PbCO}_3 \cdot \text{PbO}$ [3] $2\text{PbCO}_3 \cdot \text{Pb(OH)}_2$ [4] $\text{PbSO}_4 \cdot \text{PbO}$
- Q.39** Metallurgy is the following process
[1] Concentration of ore [2] Calcination of ore
[3] Extraction of metal from its ore [4] Smelting
- Q.40** Froth flotation process is used in the concentration of following-
[1] Impurities dissolved in water [2] Surface active organic compounds
[3] MgSiO_3 [4] Sulphide ore
- Q.41** Lead pencil contains
[1] Pb [2] FeS [3] Graphite [4] PbS
- Q.42** For the protection of iron from rusting its surface is electroplated with the following metal
[1] Cu [2] Zn [3] Mg. [4] Pb
- Q.43** The chemical formula of rust is
[1] FeO [2] Fe_3O_4 [3] $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ [4] $\text{FeO} \cdot x\text{H}_2\text{O}$
- Q.44** Which of the following 'Properties is not shown by copper?
[1] High conduction of heat [2] Low conduction of electricity
[3] Tensile strength [4] Malleability
- Q.45** Which of the following is used in the photography?
[1] AgCl [2] AgBr [3] AgI [4] Ag_2O
- Q.46** When molten copper is cooled slowly blistered copper is obtained because the following gas comes out
[1] Sulphur dioxide [2] carbon dioxide [3] Carbon monoxide [4] Water vapours
- Q.47** Spiegeleisen is an alloy of
[1] Fe, C and Mn [2] Fe, Cu and Mn [3] Fe, Ca and Zn [4] Fe, C and Zn
- Q.48** The acidic Bessemer used in the production of steel from cast iron contains, the inner lining of
[1] CaO . [2] MgO [3] SiO_2 [4] Graphite
- Q.49** Which of the following is known as Thomas slag?
[1] MnSiO_3 [2] FePO_4 [3] $\text{Ca}_3(\text{PO}_4)_2$ [4] CaSiO_3
- Q.50** In the Siemens Martin open hearth process for the production of steel. The following is used for the oxidation of impurities
[1] Hot air [2] Hematite [3] Limonite [4] CO
- Q.51** In the formation of wrought iron from cast iron, the percentage of carbon is reduced by using the reverberatory furnace with the lining of the following material
[1] Magnetite [2] Silica [3] Magnesium [4] Calcium oxide
- Q.52** In the Serpek's process for the purification of bauxite
[1] Bauxite is fused with Na_2CO_3 [2] Bauxite is heated with C and N_2
[3] Bauxite is heated with aq.: NaOH solution [4] None of these
- Q.53** In the amalgamation method for the extraction of silver from silver ore
[1] It is heated with sodium cyanide solution
[2] It is grinded with common salt and roasted pyrites and then agitated with mercury.
[3] Molten zinc is added to the ore and the mixture is agitated
[4] None of the above
- Q.54** High quantity of heat is produced in the formation of Al_2O_3 . This property is used
[1] Deoxidation [2] Confectionery [3] Photography [4] Thermite welding

- Q.55** Lapis-Lazuli is a blue coloured precious stone. It is mineral of
 [1] Sodium aluminosilicate [2] Zinc cobaltate [3] Basic copper carbonate [4] Prussian blue
- Q.56** Plaster of Paris is
 [1] CaSO_4 [2] $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ [3] $2\text{CaSO}_4 \cdot \text{H}_2\text{O}$ [4] $\text{CaSO}_4 \cdot \text{H}_2\text{O}$
- Q.57** Epsom salt is
 [1] $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ [2] $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ [3] $\text{CuSO}_4 \cdot \text{H}_2\text{O}$ [4] $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$
- Q.58** The process of setting of plaster of Paris is
 [1] Oxidation with atmospheric oxygen [2] Combination with atmospheric CO_2
 [3] Dehydration [4] formation of another hydrate by hydration.
- Q.59** The extraction Of which of" the following metals is difficult from its oxide?
 [1] Cs [2] Ag [3] Zn [4] Mg
- Q.60** Washing soda is
 [1] $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ [2] $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ [3] $\text{Na}_2\text{CO}_3 \cdot 5\text{H}_2\text{O}$ [4] Na_2CO_3
- Q.61** Blistere copper is
 [1] Pure copper [2] Ore of copper [3] Alloy of copper [4] Impure copper
- Q.62** The following is used in the extraction of copper-
 [1] Cu_2S [2] Pyrite [3] Silver argento cyanide [4] CuFeS_2
- Q.63** The salt which is found in least quantity in minerals is-
 [1] Chloride [2] Sulphate [3] Sulphide [4] Nitrate
- Q.64** The most common method for extraction of metals from oxide ores involves
 [1] Carbon reduction [2] Aluminium reduction [3] Hydrogen reduction [4] Electrolytic reduction
- Q.65** Silicon is the main constituent of
 [1] Alloys [2] Rocks [3] Animals [4] Vegetation
- Q.66** Reverberatory furnace is employed in the metallurgical process mainly for
 [1] Reduction of oxide ores [2] Smelting of sulphide ores
 [3] Obtaining magnetic materials [4] Conversion of chloride to sulphate
- Q.67** Which of the following can conduct electricity in solid state?
 [1] diamond [2] Graphite [3] Iodine [4] Sodium chloride
- Q.68** Which of the following type of crystals is softest and has lowest melting point
 [1] Covalent [2] Ionic [3] Metallic [4] Molecular
- Q.69** The closest ABABAB structure is shown by- .
 [1] Simple cubic packing [2] Body centered cubic packing
 [3] Face centered cubic packing [4] hexagonal closest packing
- Q.70** If a crystal contains two atoms per unit cell then its crystal structure is
 [1] Octahedral [2] Body centered cubic
 [3] Face centered cubic [4] None of these
- Q.71** The unit cell of a crystal lattice contains only one atom, the structure of the lattice is
 [1] simple cube [2] bcc [3] fcc [4] None of these
- Q.72** The following metal separates as volatile oxide in the roasting of sulphide ore is
 [1] As [2] Zn [3] Cu [4] Al
- Q.73** The calcination of an ore makes it
 [1] Hard [2] Ductile [3] Porous [4] None of these
- Q.74** The oxides of metals are generally
 [1] Acidic [2] Basic [3] Amphoteric [4] Neutral

- Q.75** The following reaction is involved in the Hall's method of purification of bauxite
 [1] $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O} + 2\text{NaOH} \rightarrow 2\text{NaAlO}_2 + 3\text{H}_2\text{O}$ [2] $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O} + \text{Na}_2\text{CO}_3 \rightarrow 2\text{NaAlO}_2 + 2\text{H}_2\text{O} + \text{CO}_2$
 [3] $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O} + 3\text{C} + \text{N}_2 \rightarrow 2\text{AlN} + 3\text{CO} + 2\text{H}_2\text{O}$ [4] None of these
- Q.76** Ag can be precipitated from a solution of sodium argento cyanide by
 [1] Zn [2] I^- ions [3] Hg [4] None of these
- Q.77** The red ore of iron is
 [1] Fe_2O_3 [2] CuFeS_2 [3] Fe_3O_4 [4] $\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$
- Q.78** The grey ore of iron is
 [1] Hematite [2] Magnetite [3] Siderite [4] Limonite
- Q.79** If carbon is present in cast iron in the form of cementite then it is known as
 [1] White cast iron [2] Grey cast iron [3] Wrought iron [4] None of these
- Q.80** In the basic Bessemer process, the Bessemer convertor is lined with
 [1] silica [2] Graphite [3] Magnesite [4] None of these
- Q.81** The basic Bessemer process for the production of steel from cast iron is used when cast iron contains comparatively greater impurity of
 [1] Phosphorus [2] Manganese [3] Carbon [4] None of these
- Q.82** Electrolytic reduction method is used in the extraction of -
 [1] High electronegative elements [2] High electropositive elements
 [3] Transition elements [4] Inert gases
- Q.83** Of the following, the metals that can not be obtained by electrolysis of the aqueous solution of their salts are -
 [1] Ag [2] Mg & Al [3] Cu [4] Cr
- Q.84** Sapphire is the mineral of -
 [1] Cu [2] Zn [3] Al [4] Mg
- Q.85** The composition of the slag obtained in the extraction of copper is-
 [1] CaSiO_2 [2] CuSiO_3 [3] FeSiO_3 [4] ZnSiO_3
- Q.86** The colour of $(\text{NH}_4)_2 \cdot \text{Fe}_2(\text{SO}_4) \cdot 24\text{H}_2\text{O}$ is -
 [1] White [2] green [3] Violet [4] Blue
- Q.87** Bordeaux mixture is -
 [1] $\text{CuSO}_4 + \text{Lime}$ [2] $\text{CuSO}_4 + \text{CuCO}_3$ [3] $\text{CuSO}_4 + \text{Na}_2\text{CO}_3$ [4] $\text{CuSO}_4 + \text{NaOH}$
- Q.88** Which of the following is not a method for the purification of metal?
 [1] Baeyer's process [2] Poling [3] Hoop's process [4] Liquification
- Q.89** Which of the following is not a correct match?
 [1] Cu - Chalcopyrites [2] Al- Cryolite [3] Zn-Calamine [4] Ag-Azurite blue
- Q.90** Anode mud means
 [1] Impure metal used as anode
 [2] The metal mixture collected below the anode during the electrolytic refining of a metal
 [3] Calcium phosphate
 [4] Graphite anode

Answer Key - 2

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ans.	1	3	4	1	4	2	3	3	3	1	1	1	2	1	2	2	3	2	4	1	2	3	2	3	1
Qus.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ans.	1	2	3	3	2	3	2	3	1	3	2	3	3	3	4	3	2	3	2	2	1	1	3	3	2
Qus.	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	1	2	2	4	1	3	4	4	1	1	4	4	4	1	2	1	2	1	4	2	1	1	3	2	2
Qus.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90										
Ans.	1	1	4	1	3	1	2	2	3	3	2	1	1	4	2										

Exercise # 3

- Q.1** Which of the following is slag [CPMT 1994]
[1] CaO [2] CaSO₄ [3] CaSiO₃ [4] SiO₂
- Q.2** In the metallurgy of aluminium, cryolite is mixed in the molten state because it [Roorkee 1995]
[1] Increases the melting point of alumina [2] Oxidises alumina
[3] Reduces alumina [4] Decreases the melting point of alumina
- Q.3** An important oxide ore of iron is [MP PAT 1993; MP PET/PMT 1998; MP PET 1990, MP PMT 1994,96]
[1] Haematite [2] Siderite [3] Pyrites [4] Malachite
- Q.4** Cassiterite is an ore of [CBSE 1999; Delhi PMT 1996]
[1] Mn [2] Ni [3] Sb [4] Sn
- Q.5** Which of the following is most densiest [CPMT 1996]
[1] Fe [2] Cu [3] B [4] Pb
- Q.6** When NaOH is prepared, the gas released is [CPMT 1996]
[1] Cl₂ [2] N₂ [3] O₂ [4] H₂O
- Q.7** Alumino-thermic process is used for metallurgy of [CPMT 1996]
[1] Pb [2] Ag [3] Al [4] None of these
- Q.8** Which of the following metals will not react with a solution of CuSO₄ [CPMT 1996]
[1] Fe [2] Zn [3] Mg [4] Hg
- Q.9** Aluminium is most abundant in earth crust yet it is obtained from bauxite because [CPMT 1997]
[1] Bauxite is available in larger quantity [2] Of easy extraction of aluminium from it
[3] Bauxite contains maximum aluminium [4] Bauxite is less impure
- Q.10** Identify the correct statement [CPMT 1997]
[1] Elemental sodium can be prepared and isolated by electrolysis of an aqueous solution of sodium chloride
[2] Elemental sodium is a strong oxidizing agent
[3] Elemental sodium is insoluble in ammonia
[4] Elemental sodium is easily oxidized
- Q.11** Among the following statements, the incorrect one is [IIT 1997]
[1] Calamine and siderite are carbonates [2] Argentite and cuprite are oxides
[3] Zinc blende and pyrites are sulphides [4] Malachite and azurite are ores of copper
- Q.12** The only cations present in a slightly acidic solution are Fe³⁺, Zn²⁺ and Cu²⁺, The reagent that when added in excess to this solution would identify and separate Fe³⁺ in one step is [IIT 1997]
[1] 2M HCl [2] 6M NH₃ [3] 6M NaOH [4] H₂S gas
- Q.13** Which of the following does not react with AgCl [AIIMS 1997]
[1] NaNO₃ [2] Na₂CO₃ [3] Na₂S₂O₃ [4] NH₄OH
- Q.14** Na imparts yellow colour to Bunsen flame because of [Raj. PMT 1997]
[1] Low ionisation potential [2] Sensitivity
[3] Sublimation [4] Absorbed high radiation
- Q.15** Sn is dissolved in excess of NaOH solution, the compound obtained is [Raj. PMT 1997]
[1] Sn(OH)₂ [2] Na₂SnO₃ [3] Na₂SnO₂ [4] SnO₂
- Q.16** Addition of high proportions of manganese makes steel useful in making rails of rail-roads because manganese [IIT 1998]
[1] Gives hardness to steel [2] Can show highest oxidation state of + 7
[3] Can remove oxygen and sulphur [4] None of these
- Q.17** Highly pure dilute solution of sodium in liquid ammonia [IIT 1998]
[1] Shows blue colour [2] Produces hydrogen gas
[3] Produces sodium amide [4] None of these

- Q.18** Which of the following statement(s) is (are) correct with reference to the ferrous and ferric ions [IIT 1998]
 [1] Fe^{3+} gives brown colour with potassium fer ricyanide
 [2] Fe^{2+} gives blue precipitate with potassium ferricyanide
 [3] Fe^{3+} gives black colour with potassium thiocyanate
 [4] Fe^{2+} gives brown colour with ammonium thiocyanate
- Q.19 Assertion:** $\text{Al}(\text{OH})_3$ is amphoteric in nature [IIT 1998]
Reason: Al - O and O - H bonds can be broken with equal ease in $\text{Al}(\text{OH})_3$
 [1] Both assertion and reason are correct and reason is the correct explanation of assertion
 [2] Both assertion and reason are correct but reason is not the correct explanation of assertion
 [3] Assertion is correct but reason is incorrect
 [4] Assertion is incorrect but reason is correct
- Q.20** The main salt soluble in sea water is [MP PMT 1998]
 [1] MgCl_2 [2] NaCl [3] MgSO_4 [4] CaSO_4
- Q.21** Titanium containing mineral found in our country is [Rajasthan PET 1999]
 [1] Bauxite [2] Dolomite [3] Chalcopyrites [4] Elmanite
- Q.22** Ore pitch blende is main source of [Rajasthan PET 1999]
 [1] Ra [2] Ce [3] Th [4] Mg
- Q.23** Main ore of aluminium is [CPMT 1989, 91, 2001; Rajasthan PMT 1997; Rajasthan PET 1999]
 [1] Bauxite [2] Corundum [3] Cryolite [4] Magnetite
- Q.24** Galvanisation is the [CPMT 1980,86,91,99; MP PET/PMT 1988; Pb. PET 1999]
 [1] Deposition of Zn on Fe [2] Deposition of Al on Fe
 [3] Deposition of Sn of Fe [4] Deposition of Cu on Fe
- Q.25** In the commercial electrochemical process for aluminium extraction, the electrolyte used is [IIT 1999]
 [1] $\text{Al}(\text{OH})_3$ in NaOH solution [2] An aqueous solution of $\text{Al}_2(\text{SO}_4)_3$
 [3] A molten mixture of Al_2O_3 and Na_3AlF_6 [4] A molten mixture of $\text{AlO}(\text{OH})$ and $\text{Al}(\text{OH})_3$
- Q.26** Percentage of lead in lead pencil is [CBSE 1999]
 [1] Zero [2] 20 [3] 80 [4] 70
- Q.27** In the oxidation of Cu. the reaction which takes place in bessemer converter is [CPMT 1999]
 [1] $2\text{CuFeS}_2 + \text{O}_2 \rightarrow \text{Cu}_2\text{S} + \text{FeS} + \text{SO}_2$ [2] $2\text{Cu}_2\text{S} + 3\text{O}_2 \rightarrow 2\text{Cu}_2\text{O} + 2\text{SO}_2$
 [3] $2\text{Cu}_2\text{O} + \text{Cu}_2\text{S} \rightarrow 6\text{Cu} + \text{SO}_2$ [4] $2\text{FeS} + 3\text{O}_2 \rightarrow 2\text{FeO} + 2\text{SO}_2$
- Q.28** Which metal can't be obtained from electrolysis [CPMT 1997; RPET 1999]
 [1] Cu [2] Mg [3] Cr [4] Ni
- Q.29** FeS_2 is [Rajasthan PET 1999]
 [1] Artificial silver [2] Fool's gold [3] Mohr's salt [4] Cast iron
- Q.30** Which metal is soluble in boiling water [Rajasthan PET 1999]
 [1] Bell metal [2] Gun metal [3] Wood metal [4] None of these
- Q.31** The metal oxide which decomposed on heating is [UPSEAT 1999]
 [1] ZnO [2] Al_2O_3 [3] CuO [4] HgO
- Q.32** Purpose of smelting of an ore is [MP PMT 1990, 2001; Rajasthan PMT 2000]
 [1] To oxidise it [2] To reduce it
 [3] To remove vaporisable impurities [4] To obtain an alloy
- Q.33** Which ore is used for the manufacture of iron [CPMT 1973; 79; Rajasthan PET 2000]
 [1] Cryolite [2] Bauxite [3] Haematite [4] Chalcopyrites
- Q.34** During extraction of Fe; slag obtained is [CPMT 2000]
 [1] FeO [2] FeSiO_3 [3] MgSiO_3 [4] CaSiO_3

- Q.35** The final step for the extraction of copper from copper pyrite in Bessemer converter involves the reaction
[CPMT 2000]
 [1] $4\text{Cu}_2\text{O} + \text{FeS} \rightarrow 8\text{Cu} + \text{FeSO}_4$ [2] $\text{Cu}_2\text{S} + 2\text{Cu}_2\text{O} \rightarrow 6\text{Cu} + \text{SO}_2$
 [3] $2\text{Cu}_2\text{O} + \text{FeS} \rightarrow 4\text{Cu} + \text{Fe} + \text{SO}_2$ [4] $\text{Cu}_2\text{S} + 2\text{FeO} \rightarrow 2\text{Cu} + 2\text{FeO} + \text{SO}_2$
- Q.36** The chemical processes in the production of steel from haematite ore involve [IIT Screening 2000]
 [1] Reduction [2] Oxidation
 [3] Reduction followed by oxidation [4] Oxidation followed by reduction
- Q.37** Electrolytic reduction of alumina to aluminium by Hall-Heroult process is carried out in the presence of [IIT Screening 2000]
 [1] NaCl [2] Fluorite
 [3] Cryolite which forms a melt with lower melting temperature
 [4] Cryolite which forms a melt with higher melting temperature
- Q.38** For which ore of the metal, froth floatation method is used for concentration [MP PMT 2001]
 [1] Horn silver [2] Bauxite [3] Cinnabar [4] Haematite
- Q.39** Percentage of silver in the alloy german silver is [CPMT 1985; CBSE 2000; MP PMT 2001]
 [1] 1.5% [2] 2.5% [3] 10% [4] 0%
- Q.40** A metal which is refined by poling is [RPET 2001]
 [1] Sodium [2] Blister copper [3] Zinc [4] Silver
- Q.41** The slag obtained during the extraction of copper from copper pyrites is composed mainly of [MNR 1993; MP PMT 1997; UPSEAT 2000, 01; IIT Screening 2001]
 [1] CaSiO_3 [2] FeSiO_3 [3] CuSiO_3 [4] SiO_2
- Q.42** Copper sulphate solution reacts with KCN to give
 [1] $\text{Cu}(\text{CN})_2$ [2] CuCN [3] $3\text{K}_2[\text{Cu}(\text{CN})_4]$ [4] $\text{K}_3[\text{Cu}(\text{CN})_4]$
- Q.43** If excess of NH_4OH is added to CuSO_4 solution, it forms blue coloured complex which is [MP PMT 1971, 79; Bihar CEE 1995; RPET 1999; AFMC 2001]
 [1] $\text{Cu}(\text{NH}_3)_4\text{SO}_4$ [2] $\text{Cu}(\text{NH}_3)_2\text{SO}_4$ [3] $\text{Cu}(\text{NH}_4)_4\text{SO}_4$ [4] $\text{Cu}(\text{NH}_4)_2\text{SO}_4$
- Q.44** Which one of the following ores is a chloride [EAMCET 1997; CPMT 2001]
 [1] Horn silver [2] Zincite [3] Bauxite [4] Felspar
- Q.45** Magnallium is an alloy of [CBSE 2000; CPMT 2000,01]
 [1] Magnesium (Mg) and aluminium (Al) [2] Mercury (Hg) and aluminium (Al)
 [3] Manganese (Mn) and aluminium (Al) [4] Molybdenum (Mo) and aluminium (Al)
- Q.46** Froth floatation process is used for the concentration of [CPMT 1982, 87; MP PMT 1989; EAMCET 1983; ; BHU 1997; AFMC 2000; ; MP PET 2001]
 [1] Oxide ores [2] Sulphide ores [3] Chloride ores [4] Amalgams
- Q.47** Heating of pyrites in air for oxidation of sulphur is called [CPMT 1973, 75, 78, 79, 94; Delhi PMT 1982, 84, 86; MP PMT 2000, 01, 02]
 [1] Roasting [2] Calcination [3] Smelting [4] Slag
- Q.48** General method for the extraction of metal from oxide ore is [CPMT 1983; MP PET 2002]
 [1] Carbon reduction [2] Reduction by aluminium
 [3] Reduction by hydrogen [4] Electrolytic reduction
- Q.49** Cupellation process is used in the metallurgy of [CPMT 1983, MP PET 1994; MP PMT 2000, 02]
 [1] Copper [2] Silver [3] Aluminium [4] Iron
- Q.50** The cyanide process is used for obtaining [CPMT 1976. 84, 90; MP PET/PMT 1998; AIEEE 2002]
 [1] Na [2] Ag [3] Cu [4] Zn
- Q.51** In the electrolytic extraction of aluminium, cryolite is used [CPMT 1989; Rajasthan PMT 2000; MP PMT 2000, 02]
 [1] To obtain more aluminium [2] To decrease temperature to dissolve bauxite
 [3] To protect the anode [4] As reducing agent

- Q.52** Bauxite is an oxide ore of **[BHU 1979; AFMC 1980; Rajasthan PET 1999; CPMT 1976, 2001, 02]**
 [1] Barium [2] Boron [3] Bismuth [4] Aluminium
- Q.53** Thermite is the mixture of **[BHU 1987; CPMT 2000. 01; AIIMS 2002]**
 [1] $\text{Cr}_2\text{O}_3 + \text{Al}$ [2] $\text{Cu} + \text{Mg}$ [3] $\text{Zn} + \text{Mg}$ [4] $\text{Fe} + \text{Al}$
- Q.54** Aluminium is obtained by **[Rajasthan PMT 2002]**
 [1] Reducing Al_2O_3 with coke [2] Electrolysing Al_2O_3 dissolved in Na_3AlF_6
 [3] Reducing Al_2O_3 with chromium [4] Heating alumina and cryolite
- Q.55** Blister copper is **[CPMT 1976, 85, 2002]**
 [1] Pure copper [2] Ore of copper [3] Alloy of copper [4] 1% impure copper
- Q.56** If Na is heated in presence of air, it forms **[AFMC 2002]**
 [1] Na_2CO_3 [2] Na_2O_2 [3] Na_2O [4] Both [2] and [3]
- Q.57** When metallic copper comes in contact with moisture, a green powdery/pasty coating can be seen over it. This is chemically known as **[AFMC 2002]**
 [1] Copper sulphide – Copper carbonate [2] Copper carbonate – Copper sulphate
 [3] Copper carbonate – Copper hydroxide [4] Copper sulphate – Copper sulphide
- Q.58** ZnO when heated with BaO at 1100°C gives a compound. Identify the compound **[AFMC 2002]**
 [1] BaZnO_2 [2] $\text{BaO}_2 + \text{Zn}$ [3] BaCdO_2 [4] $\text{Ba} + \text{ZnO}_2$
- Q.59** Colourless solutions of the following four salts are placed separately in four different test tubes and a strip of copper is dipped in each one of these. Which solution will turn Blue **[MP PET 2002]**
 [1] KNO_3 [2] AgNO_3 [3] $\text{Zn}(\text{NO}_3)_2$ [4] ZnSO_4
- Q.60** In smelting of iron, which of the following, reactions takes place in Blast furnace at $400^\circ\text{C} - 600^\circ\text{C}$
 [1] $\text{CaO} + \text{SiO}_2 \rightarrow \text{CaSiO}_3$ [2] $2\text{FeS} + 3\text{O}_2 \rightarrow 2\text{Fe} + \text{SO}_2$
 [3] $\text{FeO} + \text{SiO}_2 \rightarrow \text{FeSiO}_3$ [4] $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$
- Q.61** Refractory metals are used in construction of furnaces because **[CPMT 2002]**
 [1] They can withstand high temperature [2] They are chemically inert
 [3] Their melting point is high [4] None of these
- Q.62** Which of the following is most reducing agent **[Rajasthan PMT 2002]**
 [1] HNO_3 [2] Na [3] Cl_2 [4] Cr
- Q.63** CN^- solution used in extraction of which metal **[Rajasthan PMT 2002]**
 [1] Ag [2] Ti [3] Zn [4] Sn
- Q.64** Parke's process is used to extract **[MP PMT 2002]**
 [1] Silver using NaCN [2] Copper using CuFeS_2
 [3] Silver from argentiferrous lead [4] Silver by forming amalgam
- Q.65** CuSO_4 when reacts with KCN forms CuCN, which is insoluble in water. It is soluble in excess of KCN due to the formation of **[CBSE PMT 2002]**
 [1] CuCN_2 [2] $\text{K}_3[\text{Cu}(\text{CN})_4]$ [3] $\text{Cu}[\text{KCu}(\text{CN})_4]$ [4] $\text{K}_2[\text{Cu}(\text{CN})_4]$
- Q.66** Zn gives hydrogen gas with H_2SO_4 and HCl but not with HNO_3 because **[CBSE PMT 2002]**
 [1] NO_2 is reduced in preference to H_3O^+
 [2] HNO_3 is weaker acid than H_2SO_4 and HCl
 [3] Zn acts as oxidising agent when reacts with HNO_3
 [4] In electrochemical series Zn is placed above the hydrogen
- Q.67** A process used for the concentration of ore is **[MP PMT 1990; MP PET 2003]**
 [1] Froth floatation [2] Roasting [3] Electrolysis [4] Bessemerization

- Q.68** In electrolytic refining, the impure metal is made **[MP PET 2003]**
 [1] Cathode [2] Anode [3] Electrolytic bath [4] None of these
- Q.69** Purification of aluminium done by electrolytic refining is known as **[CPMT 1989; CBSE 1999; Rajasthan PET 2003]**
 [1] Serpeck's process [2] Hall's process [3] Baeyer's process [4] Hoop's process
- Q.70** In the electrolytic purification of copper some gold is found in the **[CPMT 1972; AFMC 1995; RPET 2003]**
 [1] Cathode [2] Cathode mud [3] Anode mud [4] Electrolyte
- Q.71** Thomas slag is **[Rajasthan PET 2003]**
 [1] CaSiO_3 [2] $\text{Ca}_3(\text{PO}_4)_2$ [3] MnSiO_3 [4] CaCO_3
- Q.72** Which one of the following ores is best concentrated by froth-flotation method **[AIEEE 2004]**
 [1] Malachite [2] Cassiterite [3] Galena [4] Magnetite

Answer Key - 3

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ans.	3	4	1	4	4	1	4	4	1	4	2	4	1	4	2	1	1	2	3	2	4	3	1	1	3
Qus.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ans.	1	3	2	2	3	4	2	3	4	2	4	3	3	4	2	2	4	1	1	1	2	1	1	2	2
Qus.	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72			
Ans.	2	4	1	2	4	4	3	1	2	4	1	2	1	3	2	2	1	2	4	3	2	3			