MOST COMMON QUESTIONS

METALLURGY-II

1MARK QUESTIONS

1. Name the process used for desilverisation of lead
2. Write the reaction which occurs in the zone of combustion of blast furnace during the extraction of iron
3. Write the equation for the chemical reaction taking place at $600^{o}C$ in the extraction of iron by blast furnace.
4. Define partition coefficient

2 MARKS QUESTIONS

1.Metal oxides are unstable at high temperature. Explain using Ellingham diagram

2.What is the function of lime stone and coke in the smelting of haematite?

3.With the help of Ellingham diagrams explain why aluminium is used as reducing agent in the manufacture of chromium from chromic oxide.

4. Give the composition of the following a) Limonite b) Magnetite

5. With the help of Ellingham diagrams explain why carbon monoxide acts as reducing agent in the production of cast iron from haematite

6. Draw Ellingham diagram for the formation of oxides of aluminum and magnesium. Which one of these metals act as better reducing agent above $1500^{o}C$?

7.Draw Ellingham diagram for the formation of HgO. With the help of Ellingham diagram suggest a method for the reduction of HgO

3 OR 4 MARKS QUESTIONS

1.Draw a neat labeled diagram of blast furnace used in the extraction of cast iron .Give the chemical reactions that take place in the different zones of the furnace

2. Describe the Parkes process for desilverisation of argentiferrous lead

INDUSTRIAL IMPORTANT COMPOUNDS

1MARK QUESTIONS

1.Name the catalyst used in the Contact process

2. Name the gas liberated at anode during the manufacture of caustic soda using Nelson cell

3. Name the chromium compound formed when $K_2Cr_2O_7$ solution is treated with KOH

4. How does con.H_2SO_4 react with PCl_5?

5. Write the molecular formula of Chromyl chloride

2 MARKS QUESTIONS

1.How does conc.H_2SO_4 react with oxalic acid crystals ? Give equation

2.H_2S can not be dried with conH_2SO_4. Give reason

3. How does conc.H_2SO_4 react with formic acid ? Give equation

4. How does $K_2Cr_2O_7$ solution react with KI ?

5. What happens when SO_2 gas is passed in to H^+/ $K_2Cr_2O_7$ solution ? Give the equation

6. .How does conc.H_2SO_4 react with a mixture of NaCl and $K_2Cr_2O_7$ crystals ? Give equation

7. Explain with example Nernst distribution law.

8. How does hot & con.H_2SO_4 react with aluminum metal.

3 OR 4 MARKS QUESTIONS

1.How ammonia is manufactured by Haber's process ?

2. Describe the manufacture of sodium hydroxide (caustic soda) using Nelson cell.

3. How is pure $K_2Cr_2O_7$ manufactured from chromite ore?

4. How is con H_2SO_4 is manufactured by Contact process?

D-BLOCK ELEMENTS

1 MARK & 2 MARKS QUESTIONS

1.Mention two reasons for the formation of co-ordination compounds by transition metals (2m)

2.Why are transition elements &their compounds good catalyst? Explain (2m)

3.Which among Cu^{+} &Cu^{+2} salts is coloured? (1m)

4.Among Sc^{3+}(Z=21) &Cr^{3+}(Z=24),which is coloured. Why? (2m)

5.Write the electronic configuration of 3d series of elements. Hence explain;

i)Why Cu^{+} ion and Sc^{3+} ion are colourless ii)Zn^{2+} ions are diamagnetic

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7.Name the transition metal in 3d series which shows maximum oxidation state (1m)

8.Why Fe^{3+} ion is more stable than Fe^{2+}ion?