Government Polytechnic, Jajpur

Question Bank

PRINCIPLES OF EXTRACTIVE METALLURGY

Short question:

1. What are the main metals which can be extracted by hydrometallurgical process?
2. What is entropy?
3. State faraday's first law of electrolysis.
4. Define refining.
5. Define hydrometallurgy.
6. Write two advantages of hydrometallurgy.
7. Draw the net sketch of electrolytic cell.
8. What is leaching?
9. Faradays first law of electrolysis
10. What are different leaching processes?
11. Mention few important leaching solvents.
12. Difference between electro-refining and electro-plating.
13. What are the main metals, which can be extracted by electrometallurgical process?
14. Define electrochemistry.
15. What is metallurgy?
16. Define metal.
17. Define non-metal
18. Define ore.
19. What are the main uses of metals and alloys?
20. What are main metallurgical extractive processes?
21. What is difference between hydrometallurgy and pyro-metallurgy?
22. What do we mean by drying operation?
23. Why sulphide ores are first roasted?
24. What is calcinations?
25. What is basic difference between calcinations and roasting?
26. What is autogeneous roasting?
27. What is chloridising roasting process?
28. What are different refining process?
29. What is the principles of distillation?
30. What are different processes involving in leaching of hydrometallurgy process?
31. Define flux.
32. Define slag.
33. What do we mean by unit step?
34. What is difference between unit steps and unit opration?
35. What is the purpose of zone refining?
36. What are metal/elements, which are not found(or found little amount) in india?
37. Define thermodynamic system.
38. Define state of system.
39. What are different types of systems?

40. What is entropy?
41. State second law of thermodynamics.
42. State “Nerst heat theorm”.
43. What is Henery,s law?
44. What is the zeroth law of thermodynamics?

Long Question

1. Why refining is required? Explain the principle of fire refining.
2. Differentiate between zone and fire refining.
3. Discuss different faraday’s law of electrolysis.
4. Draw a flow diagram of hydrometallurgical process of extraction indicating salient stages.
5. Discuss the zone refining with sketch.
6. Difference between electro-winning and electro-refining.
7. Explain the detail about fluidized bed roasting.
8. Explain the roasting and different types of roasting.
9. State and explain faraday’s first law of electrolysis.
10. State and explain faraday’s second law of electrolysis.
11. Describe the uses of electrolysis.
12. Describe the construction and working of electrolytic cell.
13. Briefly explain law of metallurgical thermodynamics.
14. Explain different stages of hydrometallurgical process.
15. Explain sintering with neat sketch.
16. Write five advantages of hydrometallurgy.
17. Explain the process of converting matte and pig iron.
18. Explain first order reaction and its significant.
19. Explain on detail the concept of internal energy, enthalpy, entropy and entropy change, free energy of a chemical reaction.
20. With flow diagram of hydrometallurgical extraction.