

Exam ch.3

Name:

QUESTION 1 :

A) Write the scientific expression indicated by the following sentences:

1. The quantity of formed or consumed material at any electrode if it is gas or solid is directly proportional to the quantity of electricity that passes in the electrolytic solution.
2. Electric cell in which the energy from an external source is used to make a non-spontaneous reduction oxidation reaction.
3. A quantity of electricity pass through silver nitrate in one second and 1.118 mg of silver is receipted.
4. Substance used as solvent for bauxite.
5. Descending arrangement for oxidation potential of elements.

B) From the following circuit in which platinum electrodes are used, answer the following:

a) Write the equation of the depositing silver on the cathode in the cell of silver nitrate solution.

b) On passing the current for 30 minute, 0.403 gm of silver deposited. Calculate:

1- **The current strength** passing in the electric circuit.

2- **The mass of copper** deposited in the copper II nitrate cell.

3- If 0.07 gm iron deposited in the iron nitrate cell, **show the substances** of electrolyte used if it is iron II nitrate or iron III nitrate solution.

C) Give reasons for:

- 1-Recently caryolite is exchanged by using a mixture of fluoride salts in Aluminum extraction,
- 2- The secondary cells are considered as storage batteries.
- 3- Graphite anode in extraction cell of aluminum are usually exchanged
- 4- On the purification of copper by electrolysis, the iron , zinc, silver and gold don't deposit on the cathode.
- 5- Copper sulphate solution blue color gradually disappear by dipping zinc rode.



