# ECAT Chemistry Chapter 10 Electrochemistry

| Sr | Questions | Answers Choice |
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| 1 | By using graphite electrode the electrolysis of aqueous solution of NaCl produces at anode | A. H<sub>2</sub>gas<br>B. Cl<sub>2</sub>gas<br>C. NaOH<br>D. No metal |
| 2 | A standard hydrogen electrode is used as standard electrode of which electrode potential is arbitrarily taken as | A. +1<br>B. -1<br>C. 0.1<br>D. Zero |
| 3 | In an electrolytic cell, the electrons flow from : | A. Cathode to anode or opposite<br>B. Cathode to anode<br>C. Anode to cathode<br>D. Random flow |
| 4 | Pick out the wrong statement. In electrochemical cell | A. Electrons are released at anode<br>B. Cathode is regarded as negative electrode<br>C. Chemical energy is converted into electrical energy<br>D. Salt bridge maintains the electrical neutrality of the solution |
| 5 | In a Galvanic cell | A. Chemical energy is converted into electricity<br>B. Chemical energy is converted into heat<br>C. Electrical energy is converted into heat<br>D. Electrical energy is converted into chemical energy |
| 6 | A half reaction can be defines as : | A. It always occurs at cathode.<br>B. Involves only half of a mole of electrolyte.<br>C. Occurs at one of the electrode.<br>D. Goes only half way to completion. |
| 7 | The conversion of chemical energy into electrical energy requires : | A. Electrolytic cell<br>B. Galvanic cell<br>C. Voltaic cell<br>D. Both (b) and (c) |
| 8 | When aqueous solution of NaOH is electrolysed useing graphite electrodes, the product obtained at anode is | A. O<sub>2</sub>gas<br>B. H<sub>2</sub>gas<br>C. Na metal<br>D. Na<sub>2</sub>O |
| 9 | The function of salt bridge in the galvanic or voltaic cell is to | A. Carry out oxidation at anode<br>B. To carry out reduction at cathode<br>C. Carry out electrolysis<br>D. To prevent the net charge accumulation in either of the half cells |
| 10 | The oxidation number of H is -1 in the compound | A. H<sub>2</sub>O<br>B. H<sub>3</sub>BO<sub>3</sub><br>C. NaOH<br>D. NaH |
| 11 | The standard e.m.f. of a galvanic cell involving cell reaction with n = 2 is found to be 0.2965 V at 25°C. The equilibrium constant of the reaction would be | A. 1.0 x 10<sup>10</sup><br>B. 2.0 x 10<sup>11</sup><br>C. 4.0 x 10<sup>12</sup><br>D. 1.0 x 10<sup>2</sup> |
| 12 | Sodium can be obtained by : | A. Electrolysis of acidified water.<br>B. By heating NaCl and water at 100° <sub><o:p></o:p></sub> <br>C. Electrolysis of molten sodium chloride.<br>D. Electrolysis of aqueous sodium chloride. |

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| 13 | Strong reducing agents gave | A. Greater positive value of standard reduction potential<br>B. Greater negative value of standard reduction potential<br>C. Lesser positive value of standard reaction potential<br>D. None of these |
| 14 | The electrode through which the electrons enter the electrolytic solution is electrolytic solution is | A. Anode<br>B. Cathode<br>C. May be anode or cathode<br>D. None of these |
| 15 | Which one of the following reaction takes place spontaneously | |
| 16 | In the electrolysis of fused bauxite ($Al_2O_32H_2O$) with fused Cryolite ($Na_3AlF_6$) using carbon rods as anode. The product obtained at cathode is | A. Na metal<br>B. F<sub>2</sub>gas<br>C. Al metal<br>D. O<sub>2</sub>gas |
| 17 | The oxidation state of an element is zero when | A. It forms an oxide<br>B. It forms hydride<br>C. It is in free state<br>D. Only for noble gases |
| 18 | The unit of specific conductivity is | A. Ohm cm<sup>-1</sup><br>B. Ohm cm<sup>-2</sup><br>C. Ohm<sup>-1</sup>cm<br>D. Ohm<sup>-1</sup>cm<sup>-1</sup> |
| 19 | $F_2$, $Cl_2$, $Br_2$and $I_2$lie below SHE is the Electro chemical series that is why these | A. Undergo reduction<br>B. Undergo oxidation<br>C. Liberate H<sub>2</sub>gas with steam<br>D. None of these |
| 20 | Reduction or oxidation potential of standard hydrogen electrode is : | A. 0.0 Volt<br>B. 0.8Volt<br>C. 1.0Volt<br>D. 1.8Volt |