ECAT Chemistry Online Test

Sr	Questions	Answers Choice
1	Which of the following has greatest tendency to lose electron?	A. F B. Fr C. S D. Be
2	Which of the following elements is most electronegative?	A. Oxygen B. Chlorine C. Nitrogen D. Fluorine
3	The alkali metal which is liquid at 15°C is	A. K B. Cs C. Na D. None
4	Which of the following pairs are chemically dissimilar?	A. Na and K B. Ba and Sr C. Zr and Hf D. Ca and Zn
5	Variable valency is generally exhibited by	A. Normal elements B. Transition elements C. Metallic elements D. None of these
6	Which of the following statements is most appropriate about effective nuclear charge? It depends upon	A. The shielding constant B. The atomic number C. The charge on the nucleus D. Both the nuclear charge and the shielding constant
7	Which of the following represents elements in order of increasing atomic size?	A. I, Br, Cl B. Na, Mg, C C. C, N, O D. Li, Na, K
8	In a hydrogen-oxygen fuel cell, combustion of hydrogen occurs to	A. Generate heat B. Remove adsorbed oxygen from electrode surfaces C. Produce High purity water D. Create potential difference between two electrodes
9	In a Galvanic cell, the electrons flow from	A. A node to cathode through the solution B. Cathode to anode through the external circuit C. Cathode to anode through the external circuit D. Anode to cathode through the external circuit
10	Specific conductivity of a solution	A. Increases with dilution B. Decreases with dilution C. Remains unchanged with dilution D. Depends on mass of electrolyte
11	For spontaneity of a cell, which is correct?	A. ΔG = 0,ΔE = 0 B. ΔG = -ve ,ΔE = 0 C. ΔG = +ve ,ΔE = 0 D. ΔG = -ve
12	The standard e.m.f. of a galvanic cell involving cell reaction with n = 2 is found to be 0.2965	A. 1.0 x 10¹⁰ B. 2.0 x 10¹¹

	V at 25°C. The equilibrium constant of the reaction would be	C. 4.0 x 10¹² D. 1.0 x 10²
13	An electric current is passed through silver nitrate solution using silver electrodes.10.79 g of silver was found to be deposited on the cathode if the same amount of electricity is passed through copper sulphate solution using copper electrodes, the weight of copper deposited on the cathode is	A. 6.4 g B. 2.3 g C. 128.8 g D. 3.2 g
14	An electric current is passed through silver voltameter connected to a water voltmeter. The cathode of the silver voltameter is 0.108 g more at the end of the electrolysis. The volume of oxygen evolved at STP is	A. 56 cm³ B. 550 cm³ C. 5.6 cm³ D. 11.2 cm³
15	If the standard electrode potential of CU^{2+}/Cu electrode is 0.34 V, what is the electrode potential of 0.01 M concentration of Cu^{2+}? (T=298)	A. 0.399 V B. 0.281 V C. 0.222 V D. 0.176 V
16	Which of the following (1 M) conducts more electricity?	A. Sulphuric acid B. Boric acid C. Nitric acid D. Phosphorus acid
17	Time required to deposit one millimole of aluminium metal by the passage of 9.65 amperes through molten electrolyte containing aluminium ion is	A. 30 s B. 10 s C. 30,000 s D. 10,000 s
18	Same amount of electric current is passed through solutions of $AgNO_3$and HCl. If 1.08 g of silver is obtained in the first case, the amount of hydrogen liberated as S.T.P in the second case is	A. 112 cm³ B. 22400 cm³ C. 224 cm³ D. 1.008 g
19	Standard reduction electrode potential of three metals A, B and C are erespectively + 0.05 V, -3.0 and -1.2V. The reducting power of	A. B > C > A B. A > B > C C. C > B > A D. A > C > B
20	When during electrolysis of a solution of $AgNO_3$, 9650 coulombs of charge pass through the electroplating bath, the mass of silver deposited on the cathode will be	A. 1.08 g B. 10.8 g C. 21.6 g D. 108 g
21	The unit of specific conductivity is	A. Ohm cm⁻¹ B. Ohm cm⁻² C. Ohm⁻¹cm D. Ohm⁻¹cm⁻¹
22	Corrosion is basically a	A. Altered reaction in presence of H₂O B. Electrochemical phenomenon C. Interaction D. Union between two light metals and a heavy metal
23	In electrolysis of NaCl when Pt electrode is taken then $H_2$is liberated at cathode while with Hg cathode it forms sodium amalgam	A. Hg is more inert than Pt B. More voltage is required to deduce H⁺at Hg than Pt C. Na is dissolved in Hg while it does not dissolve in Pt D. Conc. of H⁺ions is larger when Pt electrode is taken
24	A smuggler could not carry gold by chemically depositing iron on the gold surface since	A. Gold is denser B. Iron rusts C. Gold has higher reduction potential then iron D. Gold has lower reduction potential then iron
25	The reference electrode is made by using	A. ZnCl₂ B. CuSO₄ C. HgCl₂ D. Hg₂Cl₂
26	The standard EMF of Daniel cell is 1.10 volt. The maximum electrical work obtained from the Daniel cell is	A. 212.3 kJ B. 175.4 kJ C. 106.15 kJ D. 53.07 kJ
27	The equivalent conductivity of 0.1 M week acid is 100 times less than at infinite dilution. The degree of dissociation is	A. 100 B. 10 C. 0.01 D. 0.001
28	Calculate the amount of charge flowing in 2 minute in a wire of resistance 10$\Omega$when a	A. 120 C B. 240 C C. 30 C

	potential difference of 20 V is applied	C. 20 C D. 4 C
29	The specific conductance of 0.1 M NaCl solution is 1.06 x 10^{-2} ohm^{-1} mol^{-1}. Its molar conductance in ohm^{-1} cm^2 mol^{-1} is	A. 1.06 x 10² B. 1.06 x 10³ C. 1.06 x 10⁴ D. 53
30	Best way to prevent rusting of iron is by	A. Making iron cathode B. Putting it in saline water C. Both of these D. None of these