Faraday's law of electrolysis

51. Faraday has the dimensions of
(a) Coulombs
(b) Coulomb equivalent
(c) Coulomb per equivalent
(d) Coulomb per degree Kelvin

52. The required charge for one equivalent weight of silver deposite on cathode is
(a) $9.65 \times 10^7 C$ (b) $9.65 \times 10^4 C$
(c) $9.65 \times 10^3 C$ (d) $9.65 \times 10^5 C$

53. 96500 *coulombs* of electric current liberates from $CuSO_4$ solution
(a) $63.5 gm Cu$ (b) $31.75 gm Cu$
(c) $96500 gm Cu$ (d) $100 gm Cu$

54. A current of strength 2.5 *amp* was passed through $CuSO_4$ solution for 6 minutes 26 seconds. The amount of copper deposited is
(Atomic weight of $Cu = 63.5$)
(1 faraday = 96500 coulombs)
(a) 0.3175 *g* (b) 3.175 *g*
(c) 0.635 *g* (d) 6.35 *g*

55. A certain quantity of electricity is passed through an aqueous solution of $AgNO_3$ and cupric salt solution connected in series. The amount of Ag deposited is $1.08 gm$, the amount of copper deposited is (atomic weight of *Cu* = 63.5; *Ag* = 108)
(a) 0.6454 *g* (b) 6.354 *g*
(c) 0.3177 *g* (d) 3.177 *g*

56. The number of electrons required to deposit 1*gm* atom of aluminium (at. wt. = 27) from a solution of aluminium chloride will be (where *N* is Avogadro's number)
(a) 1 *N* (b) 2 *N*
(c) 3 *N* (d) 4 *N*

57. Three faradays of electricity are passed through molten Al_2O_3, aqueous solution of $CuSO_4$ and molten $NaCl$ taken in different electrolytic cells. The amount of Al, Cu and Na deposited at the cathodes will be in the ratio of
(a) 1 mole : 2 mole : 3 mole
(b) 3 mole : 2 mole : 1mole
(c) 1 mole : 1.5 mole : 3 mole
(d) 1.5 mole : 2 mole : 3 mole

58. An electrolytic cell contains a solution of Ag_2SO_4 and have platinum electrodes. A current is passed until 1.6 *gm* of O_2 has been liberated at anode. The amount of silver deposited at cathode would be
(a) 107.88 *gm* (b) 1.6 *gm*
(c) 0.8 *gm* (d) 21.60 *gm*

59. The aqueous solution of which of the following decomposes on passing electric current
(a) Canesugar
(b) Urea
(c) Methanol
(d) Potassium iodide

60. The number of Faradays needed to reduce 4 *gram* equivalents of Cu^{++} to Cu metal will be
(a) 1 (b) 2
(c) 1/2 (d) 4

61. When electricity is passed through the solution of $AlCl_3$, $13.5gm$ of Al are deposited. The number of Faraday must be
(a) 0.50 (b) 1.00
(c) 1.50 (d) 2.00

62. The value of one Faraday is
(a) $95500Cmol^{-1}$
(b) $96550Cmol^{-1}$
(c) $96500Cmol^{-1}$
(d) $98500Cmol^{-1}$

63. The quantity of electricity needed to liberate 0.5 gram equivalent of an element is
(a) 48250 *Faradays*
(b) 48250 *Coulombs*
(c) 193000 *Faradays*
(d) 193000 *Coulombs*

64. The number of coulombs required for the deposition of 107.870 *g* of silver is
(a) 96,500 (b) 48,250
(c) 1,93,000 (d) 10,000

65. When one of ampere current flows for $1sec$through a conductor, this quantity of electricity is known as
(a) Faraday (b) Coulomb
(c) E.M.F. (d) Ohm

66. The mass deposited at an electrode is directly proportional to
(a) Atomic weight
(b) Equivalent weight
(c) Molecular weight
(d) Atomic number

67. From the solution of which of the following one faraday of electricity will liberate one gram atom of metal
(a) $NaCl$ (b) $BaCl_2$
(c) $CuSO_4$ (d) $AlCl_3$

68. On electrolysis, 1 mole of aluminium will be deposited from its molten salt by
(a) 3 moles of electrons
(b) 4 moles of electrons
(c) 2 moles of electrons

(d) 1 mole of electrons

69. The atomic weight of Fe is 56. The weight of *Fe* deposited from $FeCl_3$solution by passing 0.6 Faraday of electricity is

(a) 5.6 *g* (b) 11.2 *g*

(c) 22.4 *g* (d) 33.6 *g*

70. 2.5 *F* of electricity are passed through a $CuSO_4$ solution. The number of *gm* equivalent of *Cu* deposited on anode is

(a) Zero (b) 1.25

(c) 2.5 (d) 5.0

71. The equivalent weight of a certain trivalent element is 20. Molecular weight of its oxide is

(a) 152 (b) 56

(c) 168 (d) 68

72. Silver is removed electrically from 200 *ml* of a 0.1 *N* solution of $AgNO_3$ by a current of 0.1 *ampere*. How long will it take to remove half of the silver from the solution

(a) 16 *sec* (b) 96.5 *sec*

(c) 100 *sec* (d) 10 *sec*

73. In order to separate oxygen from one mole of H_2O the required quantity of coulomb would be

(a) 1.93×10^5 (b) 9.6×10^4

(c) 1.8 (d) 3.2

74. A current of 0.25*A* is passed through $CuSO_4$ solution placed in voltameter for 45 *minutes*. The amount of *Cu* deposited on cathode is (At weight of $Cu = 63.6$)

(a) 0.20 *g* (b) 0.22 *g*

(c) 0.25 *g* (d) 0.30 *g*

75. Faraday constant

(a) Is a numerical constant

(b) Depends on equivalent

(c) Depends upon the current passed

(d) Depends on the number of electrons