

PYQSide

NEET ELECTROCHEMISTRY — QUANTITATIVE ELECTROLYSIS — PYQS

Max. Marks: 44

Questions: 11

Section A (MCQ)

- Q.1** A solution of copper sulphate is electrolysed for 10 minutes with a current of 1.5 amperes. The mass of copper deposited at cathode is :

(Given : Molar mass of Cu = 63 g mol⁻¹; 1F = 96487 C mol⁻¹) [NEET (UG) 2026]

- (1) 0.2938 g (2) 0.5876 g
(3) 2.4036 g (4) 1.7018 g

Scan or tap for the full solution 

- Q.2** Match List I with List II.

List I (Conversion)		List II (Number of Faraday required)	
A.	1 mole of H ₂ O to O ₂	I.	3F
B.	1 mol of MnO ₄ ⁻ to Mn ²⁺	II.	2F
C.	1.5 mol of Ca from molten CaCl ₂	III.	1F
D.	1 mol of FeO to Fe ₂ O ₃	IV.	5F

Choose the correct answer from the options given below : [NEET (UG) 2024]

- (1) A-II, B-IV, C-I, D-III (2) A-III, B-IV, C-I, D-II
(3) A-II, B-III, C-I, D-IV (4) A-III, B-IV, C-II, D-I

Scan or tap for the full solution 

- Q.3** Mass in grams of copper deposited by passing 9.6487 A current through a voltameter containing copper sulphate solution for 100 seconds is (Given : Molar mass of Cu: 63 g mol⁻¹, 1 F = 96487 C)

[NEET (UG) 2024]

- (1) 3.15 g (2) 0.315 g (3) 31.5 g (4) 0.0315 g

Scan or tap for the full solution 

- Q.4** The number of Faradays(F) required to produce 20 g of calcium from molten CaCl₂ (Atomic mass of Ca = 40 g mol⁻¹) is : [NEET (UG) 2020]

- (1) 2 (2) 3 (3) 4 (4) 1

Scan or tap for the full solution 

- Q.5** During the electrolysis of molten sodium chloride, the time required to produce 0.10 mol of chlorine gas using a current of 3 amperes is

[NEET 2016 (Phase 2)]

- (1) 55 minutes (2) 110 minutes
(3) 220 minutes (4) 330 minutes

Scan or tap for the full solution 

- Q.6** The number of electrons delivered at the cathode during electrolysis by a current of 1 ampere in 60 seconds is (charge on electron = 1.60 × 10⁻¹⁹ C)

[NEET 2016 (Phase 2)]

- (1) 6 × 10²³ (2) 6 × 10²⁰
(3) 3.75 × 10²⁰ (4) 7.48 × 10²³

Scan or tap for the full solution 

- Q.7** When 0.1 mol MnO₄²⁻ is oxidised the quantity of electricity required to completely oxidise MnO₄²⁻ to MnO₄⁻ is [AIPMT 2014]

- (1) 96500 C (2) 2 × 96500 C
(3) 9650 C (4) 96.50 C

Scan or tap for the full solution 

- Q.8** The weight of silver (at. wt. = 108) displaced by a quantity of electricity which displaces 5600 mL of O₂ at STP will be [AIPMT 2014]

- (1) 5.4 g (2) 10.8 g (3) 54.0 g (4) 108.0 g

Scan or tap for the full solution 

- Q.9** How many gram of cobalt metal will be deposited when a solution of cobalt (II) chloride is electrolyzed with a current of 10 amperes for 109 minutes (1 Faraday = 96,500 C; Atomic mass of Co = 59 u) [NEET 2013 (Karnataka)]

- (1) 4.0 (2) 20.0 (3) 40.0 (4) 0.66

Scan or tap for the full solution 

- Q.10** Al₂O₃ is reduced by electrolysis at low potentials and high currents. If 4.0 × 10⁴ amperes of current is passed through molten Al₂O₃ for 6 hours, what mass of aluminium is produced? (Assume 100% current efficiency, at. mass of Al = 27 g mol⁻¹).

[AIPMT 2009]

(1) 8.1×10^4 g

(2) 2.4×10^5 g

(3) 1.3×10^4 g

(4) 9.0×10^3 g

Scan or tap for the
full solution

Q.11 4.5 g of aluminium (at. mass 27 amu) is deposited at cathode from Al^{3+} solution by a certain quantity of electric charge. The volume of hydrogen produced at STP from H^+ ions in solution by the same quantity of electric charge will be

[AIPMT 2005]

(1) 44.8 L (2) 22.4 L (3) 11.2 L (4) 5.6 L

Scan or tap for the
full solution**ANSWER KEY**

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	1	2	4	2	3	3	4	2	1	4