

BORON FAMILY

Q.1 The metals that cannot be obtained by electrolysis of the aqueous solution of their salts are-

- (i) Ag (ii) Mg (iii) Cu (iv) Al
(A) ii, iv (B) i, iv (C) i, iii (D) i,iv

Q.2 The major role of fluorspar, which is added in small quantities in the electrolytic reduction of Al_2O_3 dissolved in fused cryolite is-

- (i) As a catalyst
(ii) To make the fused mixture very conducting
(iii) To lower the fusion temperature of metal
(iv) To decrease the rate of oxidation of carbon at the anode
(A) ii, iii (B) i, iv (C) i, iii (D) ii,iv

Q.3 Alum is used by dyers of clothes-

- (A) For fire proofing fabrics (B) As first-aid for cuts
(C) For softening hard water (D) As mordant

Q.4 In the aluminothermite process, Al acts as a/an-

- (A) Flux (B) Oxidising agent
(C) Reducing agent (D) Solder

Q.5 Thermite is a mixture of-

- (A) 3 parts of powdered Al and 1 part of Fe_2O_3
(B) 1 part of powdered Al and 3 parts of Fe_2O_3
(C) 1 part of powdered Al and 1 part of Fe_2O_3
(D) 2 parts of powdered Al and 1 part of Fe_2O_3 .

Q.6 Hydrogen will not reduce-

- (A) Heated cupric oxide (B) Heated ferric oxide
(C) Heated stannic oxide (D) Heated aluminium oxide

Q.7 In the electrolysis of alumina, cryolite is added to-

- (A) Lower the melting point of alumina
- (B) Increase the electrical conductivity
- (C) Minimise anodic effect
- (D) Both (A) and (B)

Q.8 When zeolite which is hydrated sodium aluminium silicate is treated with hard water, the sodium ions are exchanged with-

- (A) H^+ ions
- (B) Ca^{2+}
- (C) Mg^{2+}
- (D) Ca^{2+} and Mg^{2+}

Q.9 In which of the following minerals, Al is not present-

- (A) Cryolite
- (B) Mica
- (C) Feldspar
- (D) Fluorspar

Q.10 In commercial electrochemical process for Al extraction, electrolyte used is-

- (A) $Al(OH)_3$ in NaOH solution
- (B) An aqueous solution of $Al_2(SO_4)_3$
- (C) A molten mixture of Al_2O_3 and Na_3AlF_6
- (D) A molten mixture of $Al(OH)_3$ and $AlO(OH)$.