

THE PRACTICE OF  
WRITING AND BALANCING  
CHEMICAL EQUATIONS

Ssekyejwe A. Ronald

WRITE AND BALANCE THE EQUATIONS FOR THE FOLLOWING REACTIONS

- (1) Sodium(s) burns in air to form sodium peroxide(s)
- (2) Magnesium(s) burns in air to form magnesium oxide(s)
- (3) Calcium(s) burns in air to form calcium oxide(s)
- (4) Zinc(s) burns in air to form zinc oxide(s)
- (5) Aluminium(s) reacts with air to form aluminium oxide(s)
- (6) Heated iron(s) reacts with oxygen to form triiron tetraoxide(s)
- (7) Heated copper(s) reacts with oxygen to form copper(II) oxide(s)
- (8) Sulphur(s) burns in air to form sulphur dioxide
- (9) Carbon(s) burns in limited air to form carbon dioxide gas
- (10) Carbon burns in excess air to form carbon dioxide gas
- (11) Sodium reacts with zinc oxide to form sodium oxide and zinc
- (12) Iron(III) oxide reacts with calcium to form calcium oxide and iron
- (13) Aluminium reacts with copper(II) oxide to form aluminium oxide and copper
- (14) Phosphorus(s) burns in oxygen to form phosphorus(V) oxide(s) (phosphoric pentaoxide)
- (15) When heated, potassium chlorate(s) decomposes to form potassium chloride(s) and oxygen gas
- (16) Sodium peroxide(s) reacts with water to form sodium hydroxide solution and oxygen gas
- (17) Hydrogen peroxide(l) decomposes in the presence of manganese(IV) oxide catalyst to form water and oxygen gas
- (18) Magnesium(s) reacts with dilute sulphuric acid to form magnesium sulphate(aq) and hydrogen gas
- (19) Zinc reacts with dilute sulphuric acid to form zinc sulphate and hydrogen gas
- (20) Iron reacts with dilute sulphuric acid to form iron(II) sulphate and hydrogen gas
- (21) Aluminium reacts with dilute sulphuric acid to form aluminium sulphate and hydrogen gas
- (22) Magnesium reacts with dilute hydrochloric acid to form magnesium chloride(aq) and hydrogen gas
- (23) Zinc reacts with dilute hydrochloric acid to form zinc chloride and hydrogen gas
- (24) Iron reacts with dilute hydrochloric acid to form iron(II) chloride and hydrogen gas
- (25) Aluminium reacts with dilute hydrochloric acid to form aluminium chloride(aq) and hydrogen gas
- (26) Hydrogen reduces heated copper(II) oxide to copper and itself oxidised to water
- (27) Hydrogen reduces heated lead(II) oxide to lead and itself oxidised to water
- (28) Hydrogen reacts with chlorine gas to form hydrogen chloride gas
- (29) Hydrogen reacts with nitrogen to form ammonia
- (30) Hydrogen reacts with bromine gas to form hydrogen bromide gas
- (31) Potassium reacts with cold water to form potassium hydroxide solution and hydrogen gas
- (32) Sodium reacts with cold water to form sodium hydroxide solution and hydrogen gas
- (33) Calcium reacts with cold water to form calcium hydroxide solution and hydrogen gas
- (34) Heated magnesium reacts with steam to form magnesium oxide and hydrogen gas
- (35) Heated aluminium reacts with steam to form aluminium oxide and hydrogen gas
- (36) Heated iron reacts with steam to form triiron tetraoxide and hydrogen gas
- (37) Potassium oxide reacts with water to form potassium hydroxide
- (38) Sodium oxide reacts with water to form sodium hydroxide solution

- (39) Calcium oxide reacts with water to form calcium hydroxide solution
- (40) Carbon dioxide reacts with water to form carbonic acid
- (41) Nitrogen dioxide reacts with water to form a mixture of nitric acid and nitrous acid (aq) ( $HNO_2$ )
- (42) Phosphorus(III) oxide reacts with water to form phosphorous acid
- (43) Phosphorus(V) oxide reacts with water to form phosphoric acid
- (44) Sulphur dioxide reacts with water to form sulphurous acid (aq)
- (45) Sulphur trioxide reacts with water to form sulphuric acid(aq)
- (46) Sodium oxide reacts with dilute nitric acid to form sodium nitrate(aq) and water
- (47) Calcium oxide reacts with dilute nitric acid to form calcium nitrate(aq) and water
- (48) Magnesium oxide reacts with dilute nitric acid to form magnesium nitrate(aq) and water
- (49) Aluminium oxide reacts with nitric acid to form aluminium nitrate(aq) and water.
- (50) Zinc oxide reacts with dilute nitric acid to form zinc nitrate(aq) and water
- (51) Iron(II) oxide reacts with dilute nitric acid to form iron(II) nitrate(aq) and water
- (52) Iron(III) oxide reacts with dilute nitric acid to form iron(III) nitrate(aq) and water
- (53) Lead(II) oxide reacts with dilute nitric acid to form lead(II) nitrate(aq) and water
- (54) Copper(II) oxide reacts with dilute nitric acid to form copper(II) nitrate(aq) and water
- (55) Potassium hydroxide reacts with dilute nitric acid to form potassium nitrate(aq) and water
- (56) Sodium hydroxide(s) reacts with dilute nitric acid to form sodium nitrate(aq) and water
- (57) Calcium hydroxide(s) reacts with dilute nitric acid to form calcium nitrate(aq) and water
- (58) Magnesium hydroxide(s) reacts with dilute nitric acid to form magnesium nitrate(aq) and water
- (59) Aluminium hydroxide(s) reacts with dilute nitric acid to form aluminium nitrate(aq) and water.
- (60) Zinc hydroxide(s) reacts with dilute nitric acid to form zinc nitrate(aq) and water
- (61) Iron(II) hydroxide(s) reacts with dilute nitric acid to form iron(II) nitrate(aq) and water
- (62) Iron(III) hydroxide(s) reacts with dilute nitric acid to form iron(III) nitrate(aq) and water
- (63) Lead(II) hydroxide(s) reacts with dilute nitric acid to form lead(II) nitrate(aq) and water
- (64) Copper(II) hydroxide(s) reacts with dilute nitric acid to form copper(II) nitrate(aq) and water
- (65) Sodium oxide reacts with dilute hydrochloric acid to form sodium chloride(aq) and water
- (66) Calcium oxide reacts with dilute hydrochloric acid to form calcium chloride(aq) and water
- (67) Magnesium oxide reacts with dilute hydrochloric acid to form magnesium chloride(aq) and water
- (68) Aluminium oxide reacts with dilute hydrochloric acid to form aluminium chloride(aq) and water.
- (69) Zinc oxide reacts with dilute hydrochloric acid to form zinc chloride(aq) and water
- (70) Iron(II) oxide reacts with dilute hydrochloric acid to form iron(II) chloride(aq) and water

- (71) Iron(III) oxide reacts with hydrochloric acid to form iron(III) chloride(aq) and water
- (72) Lead(II) oxide reacts with dilute hydrochloric acid to form lead(II) chloride(s) and water
- (73) Copper(II) oxide reacts with dilute hydrochloric acid to form copper(II) chloride(aq) and water
- (74) Potassium hydroxide reacts with dilute hydrochloric acid to form potassium chloride(aq) and water
- (75) Sodium hydroxide reacts with dilute hydrochloric acid to form sodium chloride(aq) and water
- (76) Calcium hydroxide reacts with dilute hydrochloric acid to form calcium chloride(aq) and water
- (77) Magnesium hydroxide reacts with dilute hydrochloric acid to form magnesium chloride(aq) and water
- (78) Aluminium hydroxide reacts with dilute hydrochloric acid to form aluminium chloride(aq) and water.
- (79) Zinc hydroxide reacts with dilute hydrochloric acid to form zinc chloride(aq) and water
- (80) Iron(II) hydroxide reacts with dilute hydrochloric acid to form iron(II) chloride(aq) and water
- (81) Iron(III) hydroxide reacts with dilute hydrochloric acid to form iron(III) chloride(aq) and water
- (82) Lead(II) hydroxide reacts with dilute hydrochloric acid to form lead(II) chloride(s) and water
- (83) Copper(II) hydroxide reacts with dilute hydrochloric acid to form copper(II) chloride(aq) and water
- (84) Sodium oxide reacts with dilute sulphuric acid to form sodium sulphate(aq) and water
- (85) Calcium oxide reacts with dilute sulphuric acid to form calcium sulphate(aq) and water
- (86) Magnesium oxide reacts with dilute sulphuric acid to form magnesium sulphate(aq) and water
- (87) Aluminium oxide reacts with dilute sulphuric acid to form aluminium sulphate(aq) and water.
- (88) Zinc oxide reacts with dilute sulphuric acid to form zinc sulphate(aq) and water
- (89) Iron(II) oxide reacts with dilute sulphuric acid to form iron(II) sulphate(aq) and water
- (90) Iron(III) oxide reacts with dilute sulphuric acid to form iron(III) sulphate(s) and water
- (91) Lead(II) oxide reacts with dilute sulphuric acid to form lead(II) sulphate(aq) and water
- (92) Copper(II) oxide reacts with dilute sulphuric acid to form copper(II) sulphate(aq) and water
- (93) Potassium hydroxide reacts with dilute sulphuric acid to form potassium sulphate(aq) and water
- (94) Sodium hydroxide reacts with dilute sulphuric acid to form sodium sulphate(aq) and water
- (95) Calcium hydroxide reacts with dilute sulphuric acid to form calcium sulphate(aq) and water
- (96) Magnesium hydroxide reacts with dilute sulphuric acid to form magnesium sulphate(aq) and water

- (97) Aluminium hydroxide reacts with dilute sulphuric acid to form aluminium sulphate(aq) and water.
- (98) Zinc hydroxide reacts with dilute sulphuric acid to form zinc sulphate(aq) and water
- (99) Iron(II) hydroxide reacts with dilute sulphuric acid to form iron(II) sulphate(aq) and water
- (100) Iron(III) hydroxide reacts with dilute sulphuric acid to form iron(III) sulphate(s) and water
- (101) Lead(II) hydroxide reacts with dilute sulphuric acid to form lead(II) sulphate(aq) and water
- (102) Copper(II) hydroxide reacts with dilute sulphuric acid to form copper(II) sulphate(aq) and water
- (103) Potassium hydrogen carbonate reacts with dilute nitric acid to form potassium nitrate, carbon dioxide and water
- (104) Sodium hydrogen carbonate reacts with dilute nitric acid to form sodium nitrate, carbon dioxide and water
- (105) Potassium carbonate reacts with dilute nitric acid to form potassium nitrate, carbon dioxide and water
- (106) Sodium carbonate reacts with dilute nitric acid to form sodium nitrate, carbon dioxide and water
- (107) Barium carbonate(s) reacts with dilute nitric acid to form barium nitrate, carbon dioxide and water
- (108) Calcium carbonate(s) reacts with dilute nitric acid to form calcium nitrate, carbon dioxide and water
- (109) Magnesium carbonate(s) reacts with dilute nitric acid to form magnesium nitrate, carbon dioxide and water
- (110) Zinc carbonate(s) reacts with dilute nitric acid to form zinc nitrate, carbon dioxide and water
- (111) Iron(II) carbonate(s) reacts with dilute nitric acid to form iron(II) nitrate, carbon dioxide and water
- (112) Lead(II) carbonate(s) reacts with dilute nitric acid to form lead(II) nitrate, carbon dioxide and water
- (113) Copper(II) carbonate(s) reacts with dilute nitric acid to form copper(II) nitrate, carbon dioxide and water
- (114) Potassium hydrogen carbonate reacts with dilute hydrochloric acid to form potassium chloride, carbon dioxide and water
- (115) Sodium hydrogen carbonate reacts with dilute hydrochloric acid to form sodium chloride, carbon dioxide and water
- (116) Potassium carbonate reacts with dilute hydrochloric acid to form potassium chloride, carbon dioxide and water
- (117) Sodium carbonate reacts with dilute hydrochloric acid to form sodium chloride, carbon dioxide and water
- (118) Barium carbonate(s) reacts with dilute hydrochloric acid to form barium chloride, carbon dioxide and water
- (119) Calcium carbonate(s) reacts with dilute hydrochloric acid to form calcium chloride, carbon dioxide and water
- (120) Magnesium carbonate(s) reacts with dilute hydrochloric acid to form magnesium chloride, carbon dioxide and water

- (121) Zinc carbonate(s) reacts with dilute hydrochloric acid to form zinc chloride, carbon dioxide and water
- (122) Iron(II) carbonate(s) reacts with dilute hydrochloric acid to form iron(II) chloride, carbon dioxide and water
- (123) Lead(II) carbonate(s) reacts with dilute hydrochloric acid to form lead(II) chloride, carbon dioxide and water
- (124) Copper(II) carbonate(s) reacts with dilute hydrochloric acid to form copper(II) chloride, carbon dioxide and water
- (125) Potassium hydrogen carbonate reacts with dilute sulphuric acid to form potassium sulphate, carbon dioxide and water
- (126) Sodium hydrogen carbonate reacts with dilute sulphuric acid to form sodium sulphate, carbon dioxide and water
- (127) Potassium carbonate reacts with dilute sulphuric acid to form potassium sulphate, carbon dioxide and water
- (128) Sodium carbonate reacts with dilute sulphuric acid to form sodium sulphate, carbon dioxide and water
- (129) Barium carbonate(s) reacts with dilute sulphuric acid to form barium sulphate(s), carbon dioxide and water
- (130) Calcium carbonate(s) reacts with dilute sulphuric acid to form calcium sulphate, carbon dioxide and water
- (131) Magnesium carbonate(s) reacts with dilute sulphuric acid to form magnesium sulphate, carbon dioxide and water
- (132) Zinc carbonate(s) reacts with dilute sulphuric acid to form zinc sulphate, carbon dioxide and water
- (133) Iron(II) carbonate(s) reacts with dilute sulphuric acid to form iron(II) sulphate, carbon dioxide and water
- (134) Lead(II) carbonate(s) reacts with dilute sulphuric acid to form lead(II) sulphate, carbon dioxide and water
- (135) Copper(II) carbonate(s) reacts with dilute sulphuric acid to form copper(II) sulphate, carbon dioxide and water
- (136) Magnesium nitrate(aq) reacts with sodium hydroxide(aq) to form magnesium hydroxide(s) and sodium nitrate(aq)
- (137) Aluminium nitrate(aq) reacts with sodium hydroxide(aq) to form aluminium hydroxide(s) and sodium nitrate(aq)
- (138) Zinc nitrate(aq) reacts with sodium hydroxide to form zinc hydroxide(s) and sodium nitrate
- (139) Iron(II) nitrate(aq) reacts with sodium hydroxide to form iron(II) hydroxide(s) and sodium nitrate
- (140) Iron(III) nitrate(aq) reacts with sodium hydroxide to form iron(III) hydroxide(s) and sodium nitrate
- (141) Lead(II) nitrate(aq) reacts with sodium hydroxide to form lead(II) hydroxide(s) and sodium nitrate
- (142) Copper(II) nitrate(aq) reacts with sodium hydroxide to form copper(II) hydroxide(s) and sodium nitrate
- (143) Silver nitrate(aq) reacts with sodium hydroxide to form silver hydroxide(s) and sodium nitrate
- (144) Magnesium chloride(aq) reacts with sodium hydroxide(aq) to form magnesium hydroxide(s) and sodium chloride(aq)

- (145) Aluminium chloride(aq) reacts with sodium hydroxide(aq) to form aluminium hydroxide(s) and sodium chloride(aq)
- (146) Zinc chloride(aq) reacts with sodium hydroxide to form zinc hydroxide(s) and sodium chloride(aq)
- (147) Iron(II) chloride(aq) reacts with sodium hydroxide to form iron(II) hydroxide(s) and sodium chloride(aq)
- (148) Iron(III) chloride(aq) reacts with sodium hydroxide to form iron(III) hydroxide(s) and sodium chloride(aq)
- (149) Copper(II) chloride(aq) reacts with sodium hydroxide to form copper(II) hydroxide(s) and sodium chloride(aq)
- (150) Magnesium nitrate(aq) reacts with potassium hydroxide(aq) to form magnesium hydroxide(s) and potassium nitrate(aq)
- (151) Aluminium nitrate(aq) reacts with potassium hydroxide(aq) to form aluminium hydroxide(s) and potassium nitrate(aq)
- (152) Zinc nitrate(aq) reacts with potassium hydroxide to form zinc hydroxide(s) and potassium nitrate
- (153) Iron(II) nitrate(aq) reacts with potassium hydroxide to form iron(II) hydroxide(s) and potassium nitrate
- (154) Iron(III) nitrate(aq) reacts with potassium hydroxide to form iron(III) hydroxide(s) and potassium nitrate
- (155) Lead(II) nitrate(aq) reacts with potassium hydroxide to form lead(II) hydroxide(s) and potassium nitrate
- (156) Copper(II) nitrate(aq) reacts with potassium hydroxide to form copper(II) hydroxide(s) and potassium nitrate
- (157) Silver nitrate(aq) reacts with potassium hydroxide to form silver hydroxide(s) and potassium nitrate
- (158) Lead(II) nitrate(aq) reacts with dilute sulphuric acid to form lead(II) sulphate(s) and nitric acid
- (159) Barium nitrate(aq) reacts with dilute sulphuric acid to form barium sulphate(s) and nitric acid
- (160) Lead(II) nitrate(aq) reacts with sodium sulphate(aq) to form lead(II) sulphate and sodium nitrate
- (161) Barium chloride(aq) reacts with sulphuric acid to form barium sulphate and nitric acid
- (162) Barium nitrate(aq) reacts with sodium sulphate(aq) to form barium sulphate(s) and sodium nitrate
- (163) Barium chloride(aq) reacts with sodium sulphate(aq) to form barium sulphate and sodium nitrate
- (164) Barium nitrate(aq) reacts with magnesium sulphate(aq) to form barium sulphate and magnesium nitrate
- (165) Lead(II) nitrate(aq) reacts with magnesium sulphate(aq) to form lead(II) sulphate and magnesium nitrate
- (166) Barium chloride(aq) reacts with magnesium sulphate to form barium sulphate and magnesium chloride(aq)
- (167) Barium nitrate(aq) reacts with aluminium sulphate(aq) to form barium sulphate and aluminium nitrate
- (168) Lead(II) nitrate(aq) reacts with aluminium sulphate(aq) to form lead(II) sulphate and aluminium nitrate

- (169) Barium chloride(aq) reacts with aluminium sulphate to form barium sulphate and aluminium chloride(aq)
- (170) Barium nitrate(aq) reacts with zinc sulphate(aq) to form barium sulphate and zinc nitrate
- (171) Lead(II) nitrate(aq) reacts with zinc sulphate(aq) to form lead(II) sulphate and zinc nitrate
- (172) Barium chloride(aq) reacts with zinc sulphate to form barium sulphate and zinc chloride(aq)
- (173) Barium nitrate(aq) reacts with copper sulphate(aq) to form barium sulphate and copper nitrate
- (174) Lead(II) nitrate(aq) reacts with copper sulphate(aq) to form lead(II) sulphate and copper nitrate
- (175) Barium chloride(aq) reacts with copper sulphate to form barium sulphate and copper chloride(aq)
- (176) Silver nitrate(aq) reacts with hydrochloric acid to form silver chloride(s) and nitric acid
- (177) Silver nitrate reacts with sodium chloride(aq) to form silver chloride and sodium nitrate
- (178) Silver nitrate reacts with magnesium chloride(aq) to form silver chloride and magnesium nitrate(aq)
- (179) Silver nitrate reacts with calcium chloride(aq) to form silver chloride and calcium nitrate(aq)
- (180) Silver nitrate reacts with aluminium chloride(aq) to form silver chloride and aluminium nitrate(aq)
- (181) Silver nitrate reacts with copper(II) chloride(aq) to form silver chloride and copper(II) nitrate(aq)
- (182) Magnesium sulphate(aq) reacts with sodium carbonate(aq) to form magnesium carbonate(s) and sodium sulphate(aq)
- (183) Zinc sulphate(aq) reacts with potassium carbonate(aq) to form zinc carbonate(s) and potassium sulphate(aq)
- (184) Iron(II) sulphate(aq) reacts with sodium carbonate(aq) to form iron(II) carbonate(s) and sodium sulphate
- (185) Copper(II) sulphate(aq) reacts with sodium carbonate(aq) to form copper(II) carbonate(s) and sodium sulphate
- (186) Calcium chloride reacts with ammonium carbonate(aq) to form calcium carbonate(s) and ammonium chloride
- (187) Calcium nitrate reacts with sodium carbonate to form calcium carbonate and sodium nitrate
- (188) Lead(II) nitrate(aq) reacts with potassium carbonate(aq) to form lead(II) carbonate and potassium nitrate(aq)
- (189) Carbon monoxide gas reacts steam to form carbon dioxide hydrogen gas
- (190) Calcium reacts with carbon to form calcium dicarbide(s)
- (191) Carbon reacts with steam to form carbon monoxide and hydrogen gas
- (192) Carbon reacts with zinc oxide to form zinc and carbon monoxide gas
- (193) Carbon reacts with lead(II) oxide to give lead and carbon monoxide gas
- (194) Carbon reacts with iron(III) oxide to give iron and carbon monoxide gas
- (195) Carbon reacts with triiron tetraoxide to give iron and carbon monoxide gas
- (196) Carbon reacts with carbon dioxide to for carbon monoxide gas

- (197) Carbon monoxide reacts with zinc oxide to form zinc and carbon dioxide gas
- (198) Carbon monoxide reacts with lead(II) oxide to give lead and carbon dioxide gas
- (199) Carbon monoxide reacts with iron(III) oxide to give iron and carbon dioxide gas
- (200) Carbon monoxide reacts with triiron tetraoxide to give iron and carbon dioxide gas
- (201) Carbon dioxide reacts with potassium hydroxide(aq) to form potassium carbonate(aq) and water
- (202) Carbon dioxide reacts with sodium hydroxide solution to form sodium carbonate(aq) and water
- (203) Carbon dioxide reacts with calcium hydroxide solution to give calcium carbonate(s) and water
- (204) Carbon dioxide reacts with potassium hydroxide to give potassium hydrogen carbonate
- (205) Carbon dioxide reacts with sodium hydroxide to give sodium hydrogen carbonate(s)
- (206) Carbon dioxide reacts with calcium carbonate to give calcium hydrogen carbonate solution
- (207) Carbon dioxide reacts with water to form carbonic acid(aq)
- (208) Carbon dioxide reacts with calcium oxide to form calcium carbonate
- (209) Heated calcium carbonate decomposes to give calcium oxide and carbon dioxide
- (210) Magnesium carbonate decomposes when heated to form magnesium oxide and carbon dioxide gas
- (211) Barium carbonate decomposes when heated to form barium carbonate and carbon dioxide gas
- (212) Heated zinc carbonate decomposes to give zinc oxide and carbon dioxide gas
- (213) Copper(II) carbonate decomposes when heated to form copper(II) oxide and carbon dioxide gas
- (214) Iron(II) carbonate decomposes when heated to form iron(II) oxide and carbon dioxide
- (215) Lead(II) carbonate decomposes when heated to form lead(II) oxide and carbon dioxide gas
- (216) Calcium reacts with nitrogen to form calcium nitride(s)
- (217) Magnesium reacts with nitrogen to form magnesium nitride(s)
- (218) Barium reacts with nitrogen to form barium nitride(s)
- (219) Aluminium reacts with nitrogen to form aluminium nitride
- (220) Zinc reacts with nitrogen to form zinc nitride
- (221) Calcium nitride reacts with water to form calcium hydroxide and ammonia gas
- (222) Magnesium nitride reacts with water to form magnesium hydroxide and ammonia
- (223) Barium nitride reacts with water to form barium hydroxide and ammonia
- (224) Aluminium nitride reacts with water to form aluminium hydroxide and ammonia
- (225) Zinc nitride reacts with water to form zinc hydroxide and ammonia
- (226) Nitrogen react with hydrogen to form ammonia
- (227) Nitrogen reacts with chlorine to form nitrogen trichloride
- (228) Ammonium chloride(s) reacts with sodium hydroxide(s) to form sodium chloride, ammonia gas and water
- (229) Ammonium chloride(s) reacts with potassium hydroxide(s) to form potassium chloride, ammonia gas and water
- (230) Ammonium chloride(s) reacts with calcium hydroxide(s) to form calcium chloride, ammonia gas and water
- (231) Ammonium sulphate(s) reacts with sodium hydroxide(s) to form sodium sulphate, ammonia gas and water

- (232) Ammonium sulphate(s) reacts with potassium hydroxide(s) to form potassium sulphate, ammonia gas and water.
- (233) Ammonia reacts with chlorine to form ammonium chloride and nitrogen gas
- (234) Ammonia reacts with copper(II) oxide to form copper, nitrogen gas and water
- (235) Ammonia reacts with lead(II) oxide to form lead, nitrogen gas and water
- (236) Ammonia reacts with water to form ammonium hydroxide
- (237) Ammonia reacts with hydrogen chloride to form ammonium chloride(s)
- (238) Ammonia burns in oxygen to form nitrogen and water
- (239) Ammonia burns in oxygen in the presence of heated platinum catalyst to form nitrogen monoxide and water
- (240) Ammonia reacts with nitric acid to form ammonium nitrate(aq)
- (241) Ammonia reacts with sulphuric acid to form ammonium sulphate(aq)
- (242) Ammonia reacts with phosphoric acid to form ammonium phosphate
- (243) Ammonia reacts with hydrogen sulphide to form ammonium sulphide
- (244) Ammonium chloride decomposed when heated to form ammonia and hydrogen chloride gas
- (245) Ammonium sulphate decomposes when heated to form ammonia gas and sulphur dioxide and water.
- (246) Ammonium nitrate decomposes when heated to form dinitrogen oxide and water
- (247) Ammonium nitrite decomposes when heated to form nitrogen gas and water
- (248) Copper reacts with dilute nitric to form copper(II) nitrate(aq), nitrogen monoxide gas and water
- (249) Copper reacts with concentrated nitric acid to form copper(II) nitrate, nitrogen dioxide gas and water.
- (250) Nitrogen monoxide gas reacts with oxygen to form nitrogen dioxide gas
- (251) Nitrogen monoxide reacts with burning phosphorus to form phosphorus pentoxide (phosphorus(V) oxide) and nitrogen gas
- (252) Nitrogen monoxide reacts with burning magnesium to form magnesium oxide and nitrogen gas
- (253) Nitrogen dioxide gas reacts with water to form nitric acid(aq) and nitrous acid(aq)
- (254) Nitrogen dioxide reacts with sodium hydroxide solution to form sodium nitrate(aq), sodium nitrite(aq) and water
- (255) Nitrogen dioxide reacts with potassium hydroxide solution to form potassium nitrate(aq), potassium nitrite(aq) and water
- (256) Potassium nitrate(s) when heated forms potassium nitrite(s) and oxygen gas
- (257) When heated, sodium nitrate(s) decomposes to give sodium nitrite(s) and oxygen gas
- (258) Calcium nitrate decomposes when heated to give calcium oxide(s), nitrogen dioxide and oxygen gas
- (259) Magnesium nitrate when heated decomposes to form magnesium oxide(s), nitrogen dioxide and oxygen gas
- (260) Aluminium nitrate decomposes when heated to form aluminium oxide, nitrogen dioxide and oxygen gas
- (261) Zinc nitrate decomposes when heated to give zinc oxide, nitrogen dioxide and oxygen gas
- (262) Iron(III) nitrate decomposes upon heating to give iron(III) oxide, nitrogen dioxide and oxygen gas
- (263) Lead(II) nitrate when heated decomposes to form lead(II) oxide, nitrogen dioxide and oxygen gas

- (264) Copper(II) nitrate decomposes when heated to form copper(II) oxide, nitrogen dioxide and oxygen gas
- (265) Silver nitrate decomposes upon heating to form silver, nitrogen dioxide and oxygen gas
- (266) Sulphur reacts with hot concentrated nitric acid to form sulphuric acid, nitrogen dioxide and water
- (267) Carbon reacts with hot concentrated nitric acid to form carbon dioxide, nitrogen dioxide and water
- (268) Potassium nitrate(l) reacts with hot concentrated sulphuric acid(l) to form potassium hydrogen sulphate(s) and nitric acid
- (269) Sodium nitrate reacts with hot concentrated sulphuric acid to form sodium hydrogen sulphate and nitric acid
- (270) Heated sulphur(s) reacts with dry chlorine gas to form disulphur dichloride(l)
- (271) Sulphur reacts with heated carbon to form carbon disulphide(l)
- (272) Iron reacts with sulphur when heated to form iron(II) sulphide(s)
- (273) Potassium sulphite reacts with dilute sulphuric acid to form potassium sulphate(aq), sulphur dioxide and water
- (274) Sodium sulphite reacts with dilute sulphuric acid to form sodium sulphate(aq), sulphur dioxide gas and water
- (275) Potassium sulphite reacts with dilute hydrochloric acid to form potassium chloride(aq) sulphur dioxide gas and water
- (276) Sodium sulphite reacts with dilute hydrochloric acid to form sodium chloride(aq) sulphur dioxide gas and water
- (277) Sulphur dioxide reacts with water to form sulphurous acid(aq)
- (278) Sulphur dioxide gas reacts with sodium hydroxide(aq) to form sodium hydrogen sulphite(aq)
- (279) Excess sulphur dioxide reacts with sodium hydroxide(aq) to form sodium sulphite(aq) and water.
- (280) Sulphur dioxide gas reacts with potassium hydroxide(aq) to form potassium hydrogen sulphite(aq)
- (281) Excess sulphur dioxide reacts with potassium hydroxide(aq) to form potassium sulphite(aq) and water.
- (282) Burning magnesium reacts with sulphur dioxide(g) to form magnesium oxide and sulphur(s)
- (283) Sulphur dioxide reacts with oxygen to form oxygen to form sulphur trioxide gas
- (284) Sulphur trioxide reacts with water to form sulphuric acid
- (285) Magnesium oxide reacts with sulphur dioxide to form magnesium sulphate(s)
- (286) Calcium oxide reacts with sulphur dioxide to form calcium sulphate(s)
- (287) Sodium hydrogen sulphate decomposes when heated to form sodium sulphate(s), sulphur dioxide, and water
- (288) Iron(II) sulphate when heated decomposes to form iron(III) oxide(s), sulphur dioxide and sulphur trioxide gas
- (289) Iron(II) sulphide reacts with dilute sulphuric to form iron(II) sulphate(aq) and hydrogen sulphide gas
- (290) Iron(II) sulphide reacts with dilute hydrochloric acid to form iron(II) chloride(aq) and hydrogen sulphide gas
- (291) Zinc sulphide reacts with oxygen when heated in air to form zinc oxide and sulphur dioxide gas

- (292) Lead(II) sulphide reacts with oxygen when heated in air to form lead(II) oxide and sulphur dioxide gas
- (293) Aluminium sulphide reacts with water to form aluminium hydroxide and hydrogen sulphide gas.
- (294) Hydrogen sulphide burns in excess oxygen to give water and sulphur dioxide gas
- (295) Hydrogen sulphide burns in limited oxygen to give water and sulphur
- (296) Hydrogen sulphide reacts with bromine gas to form hydrogen bromide gas and sulphur(s)
- (297) Hydrogen sulphide reacts with iodine vapour to form hydrogen iodide gas and sulphur(s)
- (298) Hydrogen sulphide reacts with chlorine gas to form hydrogen chloride gas and sulphur(s)
- (299) Hydrogen sulphide reacts with hydrogen peroxide(l) to form sulphur and water
- (300) Hydrogen sulphide reacts with nitric acid to form sulphur, nitrogen dioxide and water.
- (301) Hydrogen sulphide reacts with nitric to form sulphuric acid, nitrogen dioxide and water
- (302) Hydrogen sulphide reacts with sodium hydroxide solution to form sodium sulphide solution and water
- (303) Hydrogen sulphide reacts with concentrated sulphuric acid to form sulphur and water
- (304) Hydrogen sulphide reacts with lead(II) nitrate solution to form lead(II) sulphide(s) and nitric
- (305) Sulphur reacts with hot concentrated sulphuric acid to form sulphur dioxide and water
- (306) Carbon reacts with hot concentrated sulphuric acid carbon dioxide, sulphur dioxide and water
- (307) Copper reacts with hot concentrated sulphuric acid to form copper(II) sulphate, sulphur dioxide gas and water
- (308) Magnesium reacts with hot concentrated sulphuric acid to form magnesium sulphate, sulphur dioxide gas and water
- (309) Aluminium reacts with hot concentrated sulphuric acid to form aluminium sulphate, sulphur dioxide gas and water
- (310) Zinc reacts with hot concentrated sulphuric acid to form zinc sulphate, sulphur dioxide and water
- (311) Iron reacts with hot concentrated sulphuric acid to form iron(III) sulphate(aq), sulphur dioxide gas and water.
- (312) Phosphorus(s) reacts with sodium to form sodium phosphide(s)
- (313) Phosphorus reacts with calcium to for calcium phosphide(s)
- (314) Phosphorus reacts with magnesium to form magnesium phosphide(s)
- (315) Phosphorus reacts with aluminium to form aluminium phosphide(s)
- (316) Phosphorus reacts with chlorine to form phosphorus( trichloride(l)
- (317) Phosphorus reacts with chlorine to form phosphorus pentachloride(s)
- (318) Phosphorus reacts with heated sulphur to form phosphorus trisulphide(s)
- (319) Phosphorus reacts with sulphur to form phosphorus pentasulphide(s)
- (320) Phosphorus reacts with iodine(s) to form phosphorus triiodide(l)
- (321) Phosphorus reacts with bromine(l) to form phosphorus tribromide

- (322) Phosphorus trichloride reacts with water to form phosphorous acid(aq) and hydrogen chloride gas
- (323) Phosphorus pentachloride reacts with water to give phosphoric acid(aq) and hydrogen chloride gas(g)
- (324) Phosphorus triiodide reacts with water to form phosphorous acid and hydrogen iodide
- (325) Phosphorus tribromide reacts with water to form phosphorous acid and hydrogen bromide
- (326) Phosphorus trisulphide reacts with water to form phosphorous acid(aq) and hydrogen sulphide
- (327) Phosphorus pentasulphide reacts with water to form phosphoric acid(aq) and hydrogen sulphide gas
- (328) Phosphorus tribromide reacts with bromine to form phosphorus pentabromide
- (329) Potassium permanganate(s) ( $KMnO_4$ ) reacts with concentrated hydrochloric acid to form potassium chloride(aq), manganese(II) chloride, chlorine gas and water
- (330) Manganese(IV) oxide(s) ( $MnO_2$ ) reacts with hot concentrated hydrochloric acid to form manganese(II) chloride, chlorine gas and water
- (331) Lead(IV) oxide reacts with hot concentrated hydrochloric acid to form lead(II) chloride, chlorine gas and water
- (332) Potassium reacts with chlorine to form potassium chloride
- (333) Sodium reacts with chlorine to form sodium chloride
- (334) Calcium reacts with chlorine to form calcium chloride
- (335) Magnesium reacts with chlorine to form magnesium chloride
- (336) Aluminium reacts with chlorine to form aluminium chloride
- (337) Zinc reacts with chlorine to form zinc chloride
- (338) Iron reacts with chlorine to form iron(III) chloride
- (339) Chlorine reacts with water to form hypochlorous acid(aq) ( $HOCl$ ) and hydrochloric acid
- (340) Chlorine reacts with dilute sodium hydroxide to form sodium hypochlorite(aq), sodium chloride(aq) and water
- (341) Chlorine reacts with dilute potassium hydroxide to form potassium hypochlorite, potassium chloride and water
- (342) Chlorine reacts with concentrated sodium hydroxide to form sodium chlorate(aq) ( $NaClO_3$ ), sodium chloride(aq) and water
- (343) Chlorine reacts with concentrated potassium hydroxide to form potassium chlorate(aq), potassium chloride and water
- (344) Chlorine reacts with potassium bromine solution to form potassium chloride and bromine(aq)
- (345) Chlorine reacts with potassium iodide to form potassium chloride solution and iodine(aq)
- (346) Chlorine reacts with sodium bromine solution to form sodium chloride and bromine(aq)
- (347) Chlorine reacts with sodium iodide to form sodium chloride solution and iodine(aq)
- (348) Chlorine reacts with magnesium bromine solution to form magnesium chloride and bromine(aq)
- (349) Chlorine reacts with magnesium iodide to form magnesium chloride solution and iodine(aq)

- (350) Bromine reacts with potassium iodide solution to form potassium bromide(aq) and iodine(aq)
- (351) Bromine reacts with sodium iodide to form sodium bromide solution and iodine(aq)
- (352) Sodium reacts with hydrogen chlorine to form sodium chloride and hydrogen gas
- (353) Calcium reacts with hydrogen chlorine to form calcium chloride and hydrogen gas
- (354) Magnesium reacts with hydrogen chlorine to form magnesium chloride and hydrogen gas
- (355) Aluminium reacts with hydrogen chlorine to form aluminium chloride and hydrogen gas
- (356) Zinc reacts with hydrogen chlorine to form zinc chloride and hydrogen gas
- (357) Iron reacts with hydrogen chlorine to form iron(II) chloride and hydrogen gas
- (358) Hydrogen chloride reacts with silver nitrate solution to form silver chloride and nitric acid
- (359) Hydrogen chloride reacts with lead(II) nitrate solution to form lead(II) chloride(s) and nitric acid
- (360) Lead(II) nitrate reacts with potassium iodide to form lead(II) iodide(s) and potassium nitrate

**END**

**THERE IS NO PERFECTION**

**WITHOUT PRACTICE**