

OLGC S.4 CHEMISTRY HOLIDAY WORK

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
- (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
- (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) ()
- (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 (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 (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 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) 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 potassium97) 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.