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 from 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) andIron(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.