Practice Toxins Mid-Unit Test 08-09

_____1. What type of reaction is this? $Ag\ (s) + CuI_2\ (aq) \rightarrow AgI\ (s) + Cu(s)$
(A) single displacement (B) double displacement
(C) combination reaction (D) decomposition reaction

_____2.Calcium Chloride is abbreviated
(A) CaCl (C) Ca_2Cl
(B) $CaCl_2$ (D) Cl_2Ca

_____3. What is a precipitate?
(A) a solid that forms when two solutions are mixed
(B) rain
(C) the moisture that forms when you are running
(D) the formation of water in a reaction

_____4. Carbon Dioxide is abbreviated
(A) CO (B) C_2O
(C) CO_2 (D) O_2C

_____5. $NaNO_3$ is
(A) Sodium Nitrate (B) Sodium Nitrogen
(C) Sodium Nitrogen Oxide (D) Sodium Nitrogen Trioxide

_____6. The correct chemical formula for potassium carbonate is
(A) P_2CO_3 (B) $P(CO_3)_2$ (C) K_2CO_3 (D) $K(CO_3)_2$

_____7. NF_3 is
(A) Nitrogen Fluoride (B) Nitrogen Tetrafluoride
(C) Nitrogen Trifluoride (D) Nitrogen Fluorine

_____8. Which substance is the least toxic?
(A) chlorine (LD_{50} = 850 mg/kg) (B) aspirin (LD_{50} = 200 mg/kg)
(C) cola (LD_{50} = 140 mg/kg) (D) vitamin A (LD_{50} = 2000 mg/kg)

_____9. Br_2 is
(A) Boron gas (B) Bromine gas
(C) Bromide gas (D) DiBromine gas

_____10. How many moles of potassium iodide, KI, are there in 100 grams?
(A) 0.6 moles (B) 1660 moles (C) 3.01×10^{25} moles (D) 5.0×10^{-24} moles

_____11. If you saw a container of NaCl (aq) in a lab, what would you see?
(A) solid (B) liquid (C) gas

_____12. In order to balance a chemical equation, you can change
(A) the subscripts (B) the chemical formulas
(C) the reactants and the products (D) the coefficients

_____13. How many grams of sugar (LD_{50} = 30 g/kg) would be lethal to a 175-pound man (2.2 lbs = 1kg)?
(A) 0.13 g (B) 2.65 g (C) 11550 g (D) 2386 g

_____ 14. Calculate the molar mass of ammonium phosphate, $(NH_4)_2CO_3$.
(A) 96.0 g/mole (B) 113.0 g/mole (C) 242.0 g/mole (D) 121.0 g/mole

_____ 15. What would you expect to see if you performed the following chemical reaction?
$2\ H_2O_2\ (aq) \rightarrow H_2O\ (l) + O_2\ (g)$
(A) bubbles forming in a liquid (B) just a liquid
(C) solid forming in a liquid (D) only solid forming

_____ 16. $CO_2\ (s) \rightarrow CO_2\ (g)$ is an example of
(A) a chemical change (B) a physical change
(C) a combination reaction (D) a decomposition reaction

_____ 17. What is the correct description of this reaction?

$Zn\ (s) + HCl\ (aq) \rightarrow ZnCl_2\ (aq) + H_2\ (g)$

(A) Hydrogen gas reacts with a solution of zinc chloride to produce solid zinc metal in a solution of hydrochloric acid.

(B) A solution of zinc metal reacts with solid hydrochloric acid to produce a solution of zinc chloride and hydrogen gas.

(C) Hydrogen gas reacts with solid zinc chloride to produce solid zinc metal in a solution of hydrochloric acid.

(D) Solid zinc reacts with a solution of hydrochloric acid to produce a solution of zinc chloride and hydrogen gas.

_____ 18. When the equation $Fe_2O_3 + H_2 \rightarrow Fe + H_2O$ is balanced, Fe has a coefficient of

(A) 6 (B) 3 (C) 2 (D) 1

_____ 19. What type of reaction is this: $AgNO_3\ (aq) + Cu\ (s) \rightarrow Ag\ (s) + Cu(NO_3)_2\ (aq)$?

(A) single displacement (B) double displacement (C) combination (D) decomposition

_____20. Balance the following equation. What will the coefficient be for Silver Nitrate?

$AgNO_3\ (aq) + Cu\ (s) \rightarrow Ag\ (s) + Cu(NO_3)_2\ (aq)$

(A) 1 (B) 2

(C) 3 (D) 4

Short Answer

21. Consider the following reaction. Water (H_2O) is produced from the reaction of oxygen gas (O_2) with hydrogen gas (H_2).
    a. Write a balanced chemical equation for the reaction.
    b. Is the reaction a physical change or a chemical change?
22. What type of reaction is shown below?
    $C_3H_8\ (g) + O_2\ (g) \rightarrow CO_2(g) + H_2O\ (l)$
23. State the reaction type and balance the following equation: $Pb\ (s) + I_2\ (g) \rightarrow PbI_2\ (s)$
24. State the names of each compound:
    a. $AlCl_3$
    b. $Ca(OH)_2$
25. Write the correct formulas for the following compounds:
    a. Potassium Sulfide
    b. Dinitrogen tetrafluoride

Answers:

1 a 8 d 15 a 25.
2. b 9 b 16 b
3 a 10 a 17 d
4. c 11 b 18 c
5. a 12 d 19 a
6 c 13 d 20 b
7 c 14 a 21 a $2H_2+O_2 \rightarrow 2H_2O$ b Chemical Change
22 combustion
23 synthesis (or combination); already balanced
24 Double replacement; $2AlCl_3 + 3Ca(OH)_2 \rightarrow 2Al(OH)_3 + 3CaCl_2$
25 a. K_2S b. N_2F_4