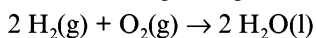


statement(s) is/are correct regarding the mass of precipitate formed?

- (a) All the four groups will obtain the same mass of precipitate.
- (b) Group A and C will obtain the same mass of precipitate.
- (c) Group B and D will obtain the same mass of precipitate.
- (d) Group A and B will obtain the same mass of precipitate.

13. Which of the following is the incorrect conclusion regarding the reaction:



- (a) 2 mole of $\text{H}_2(\text{g})$ will produce 2 mole of $\text{H}_2\text{O}(\text{l})$
- (b) 16 g of $\text{O}_2(\text{g})$ will produce 18 g of $\text{H}_2\text{O}(\text{l})$
- (c) 2 litre of $\text{O}_2(\text{g})$ at 25°C and 1 atm will produce 4 litre of $\text{H}_2\text{O}(\text{l})$ at 25°C and 1 atm
- (d) 2 molecules of $\text{H}_2\text{O}(\text{l})$ is obtained from every 3 molecules of gaseous mixture of H_2 and O_2 .

14. A quantity of 8 g CH_4 is mixed with 28 g O_2 and fired. Which of the following is correct about the combustion of CH_4 in this condition?

- (a) 1 g CH_4 will remain left unburned if carbon is quantitatively converted into CO_2 .
- (b) 4 g O_2 will remain unused if carbon is quantitatively converted into CO .
- (c) Equal moles of CO and CO_2 are formed if none of the reactants is left and there is no other side reaction.
- (d) 18 g water will form in any possible condition.

15. The oxygen needed for complete combustion of 8 g CH_4 may be obtained from complete decomposition of

- (a) $\frac{2}{3}$ mole of KClO_3
- (b) 1 mole of H_2O_2
- (c) 2 mole of NaNO_3 (up to 300°C)
- (d) 2 mole of BaO_2

16. A mixture of propane and benzene is burnt completely in excess of oxygen at 110°C . It results the production of equal volumes of $\text{CO}_2(\text{g})$ and steam (measured under identical pressure and temperature). Which of the following is correct regarding the original mixture?

- (a) The mole ratio of propane and benzene is 3:1.
- (b) The mass ratio of propane and benzene is 22:13.
- (c) The mole ratio of carbon and hydrogen atoms is 1:2.
- (d) The mass ratio of carbon and hydrogen atoms is 6:1.

17. A quantity of 6 g NaOH and 4.4 g CO_2 is allowed to react to form Na_2CO_3 or NaHCO_3 or both. Which of the following is correct statement regarding the reactions?

- (a) NaOH is the limiting reagent if there is no any formation of NaHCO_3 .
- (b) NaOH is the limiting reagent if there is no any formation of Na_2CO_3 .
- (c) Equal masses of Na_2CO_3 and NaHCO_3 are formed if none of the reactant is left.
- (d) The total mass of reaction mixture will be 10.4 g after the end of reaction, in any possible case.

18. When hydrocarbons are burnt completely in excess of oxygen gas, then

- (a) equal moles of CO_2 and H_2O are formed from alkenes.
- (b) more moles of H_2O than CO_2 are formed from alkanes.
- (c) more moles of CO_2 than H_2O are formed from alkynes.
- (d) more moles of CO_2 than H_2O are formed for any kind of hydrocarbon.