

QUIZ: CHEMICAL REACTIONS & CHEMICAL EQUATIONS-I

1. Which of the following property does NOT change on the occurrence of a chemical reaction?
- (a) Physical state
 - (b) Colour
 - (c) Temperature
 - (d) Mass

2. Identify the indicative property/ies which change in the occurrence of the following chemical reaction?

"Burning of methane in excess of air"

- (a) Physical state
 - (b) Colour
 - (c) Mass
 - (d) Temperature
3. Given below is a chemical equation of burning of propane in air.



The correct values of P, Q, R and S are

	P	Q	R	S
(a)	3	4	5	2
(b)	2	3	4	1
(c)	1	5	3	4
(d)	2	4	6	1

4. The balanced chemical equation indicating the correct physical states of reactants and products is

- (a) $2\text{Cu}_2\text{S}(\text{s}) + \text{O}_2(\text{g}) \longrightarrow \text{Cu}_2\text{O}(\text{l}) + 2\text{SO}_2(\text{g})$
- (b) $2\text{Cu}_2\text{S}(\text{aq}) + \text{O}_2(\text{g}) \longrightarrow \text{Cu}_2\text{O}(\text{s}) + 2\text{SO}_2(\text{g})$
- (c) $2\text{Cu}_2\text{S}(\text{s}) + 3\text{O}_2(\text{g}) \longrightarrow 2\text{Cu}_2\text{O}(\text{s}) + 2\text{SO}_2(\text{g})$
- (d) $2\text{Cu}_2\text{S}(\text{s}) + 3\text{O}_2(\text{g}) \longrightarrow 2\text{Cu}_2\text{O}(\text{l}) + \text{SO}_2(\text{g})$

5. Which of the following reaction involves the formation of salt and water?

- (a) Neutralization
- (b) Combination
- (c) Displacement
- (d) Combustion

Answers:

1. (d)

Explanation: According to the law of conservation of mass, the mass of substances taking part in a reaction remains the same before and after the reaction. Hence a chemical reaction does not involve any change in mass.

2. (d)

Explanation: In the reaction, all the reactants and products are colourless and in gaseous state. As it is a combustion reaction, the reaction involves evolution of heat and hence, the rise in temperature.

Note for the teacher: The teacher may create a number of questions based on the change in property involving in the occurrence of 4-5 different reactions.

The changes may be any one or more of the following- colour, physical state, smell, effervescence, and temperature, formation of precipitate or disappearance of precipitate.

3. (c)

Explanation: The prefixes at option (c) balances the given equation.

4. (c)

Note for the teacher: A variety of questions can be created on balancing of chemical equations such as

- (i) Identify one missing prefix of any one of the reactant of reaction product in a given skeleton equation.
- (ii) Identify the two missing prefixes.
- (iii) Balancing the given skeletal chemical equation.
- (iv) Specify the physical states of all the reactants and the products.

5. (a)