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- 1. Which of the following is not a physical change?
- Boiling of water to give water vapour
- Melting of ice to give water
- Dissolution of salt in water
- Combustion of Liquefied Petroleum Gas (LPG)

Answer: (d) Combustion of Liquefied Petroleum Gas (LPG)

2. The following reaction is an example of a

 $4NH_3(g) + 5O_2(g) \Rightarrow 4NO + 6H_2O$

- Displacement reaction
- Combination reaction
- Redox reaction
- Neutralisation reaction
- (i) and (iv)
- (ii) and (iii)
- (i) and (iii)
- (iii) and (iv)

Answer: (d) (iii) and (iv)

3. Which of the following statements about the given reaction are correct?

 $3\text{Fe}(s) + 4\text{H}_2\text{O}(g) \Rightarrow \text{Fe}_3\text{O}_4(s) + 4\text{H}_2(g)$

- Iron metal is getting oxidised
- Water is getting reduced
- Water is acting as reducing agent
- Water is acting as oxidising agent
- (i), (ii) and (iii)
- (iii) and (iv)
- (i), (ii) and (iv)
- (ii) and (iv)

Answer: (c) (i), (ii) and (iv)

4. Which of the following are exothermic processes?

- Reaction of water with quick lime
- Dilution of an acid
- Evaporation of water
- Sublimation of camphor (crystals)
- (i) and (ii)
- (ii) and (iii)
- (i) and (iv)
- (iii) and (iv)

Answer: (a) (i) and (ii)

- 5. Three beakers labelled as A, B and C each containing 25 mL of water were taken. A small amount of NaOH, anhydrous CuSO₄ and NaCl were added to the beakers A, B and C respectively. It was observed that there was an increase in the temperature of the solutions contained in beakers A and B, whereas in case of beaker C, the temperature of the solution falls. Which one of the following statement(s) is (are) correct?
- In beakers A and B, exothermic process has occurred.
- In beakers A and B, endothermic process has occurred.
- In beaker C exothermic process has occurred.
- In beaker C endothermic process has occurred.
- (i) only
- (ii) only
- (i) and (iv)
- (ii) and (iii)

Answer: (c) (i) and (iv)

- 6. A dilute ferrous sulphate solution was gradually added to the beaker containing acidified permanganate solution. The light purple colour of the solution fades and finally disappears. Which of the following is the correct explanation for the observation?
- KMnO₄ is an oxidising agent, it oxidises FeSO₄
- FeSO₄ acts as an oxidising agent and oxidises KMnO₄
- The colour disappears due to dilution; no reaction is involved
- KMnO₄ is an unstable compound and decomposes in presence of FeSO₄ to a colourless compound.

Answer: (d) KMnO₄ is an unstable compound and decomposes in presence of $FeSO_4$ to a colourless compound.

- 7. Which among the following is (are) double displacement reaction(s)?
- $Pb + CuCl_2 \Rightarrow PbCl_2 + Cu$
- $Na_2SO_4 + NaCl_2 \Rightarrow BaSO_4 + 2NaCl$
- $C + O_2 \Rightarrow CO_2$
- $CH_4 + 2O_2 \Rightarrow CO_2 + 2H_2O$
- (i) and (iv)
- (ii) only
- (i) and (iii)
- (iii) and (iv)

Answer: (b) (ii) Only

- 8. Which among the following statement(s) is (are) true? Exposure of silver chloride to sunlight for a long duration turns grey due to
- The formation of silver by decomposition of silver chloride
- Sublimation of silver chloride
- Decomposition of chlorine gas from silver chloride
- Oxidation of silver chloride
- (i) only
- (i) and (iii)
- (ii) and (iii)
- (iv) only

Answer: (b) (i) and (iii)

- 9. Which one of the following processes involve chemical reactions?
- Storing of oxygen gas under pressure in a gas cylinder
- Liquefaction of air
- Keeping petrol in a china dish in the open
- Heating copper wire in presence of air at high temperature

Answer: (d) Heating copper wire in presence of air at high temperature

- 10. Solid calcium oxide reacts vigorously with water to form calcium hydroxide accompanied by liberation of heat. This process is called slaking of lime. Calcium hydroxide dissolves in water to form its solution called lime water. Which among the following is (are) true about slaking of lime and the solution formed?
- It is an endothermic reaction

- It is an exothermic reaction •
- The pH of the resulting solution will be more than seven The pH of the resulting solution will be less than seven •
- •
- (i) and (ii)
- (ii) and (iii)
- (i) and (iv)
- (iii) and (iv)

Answer: (b) (ii) and (iii)