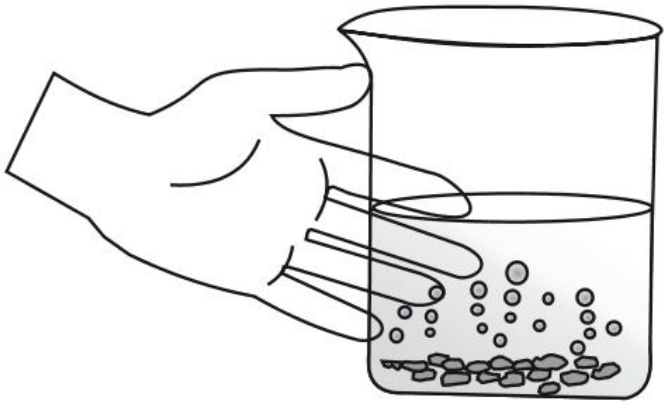
CASE STUDY QUESTION 42

Read the following and answer any four questions from (i) to (v)

Rahul is a skilled painter. He mixed a white coloured powder, compound X with water. The compound X reacted vigorously with water to produce a compound Y and a large amount of heat. Then, Rahul used the compound Y for white washing the walls. Customer was not satisfied with the work of Rahul as walls were not shining. But Rahul guaranteed him that the walls would shine after 2-3 days. And after 3 days of whitewash, the walls became shiny.



(i) Name the compound X, that Ramesh mixed with water.
(a) Calcium (b) Calcium oxide (c) Calcium carbonate (d) Calcium hydroxide

Ans: (b) Calcium oxide

(ii) Name the compound Y that Ramesh got after mixing X with water.
(a) Calcium (b) Calcium oxide (c) Calcium carbonate (d) Calcium hydroxide

Ans: (d) Calcium hydroxide

(iii) What type of reaction is occurred here?
(a) Decomposition reaction (b) Displacement reaction
(c) Double displacement reaction (d) Combination reaction

Ans: (d) Combination reaction

(iv) Which of the following reactions is responsible for shiny finish of the walls?

(a) $CaO + H_2O \rightarrow Ca(OH)_2$ (b) $Ca + CO_2 \rightarrow CaCO_3$

(c) $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$ (d) $CaCO_3 + H_2O \rightarrow Ca(OH)_2 + CO_2$

Ans: (c) $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$

(v) Which of the following reactions is responsible for shiny finish of the walls?

(a) $CaCO_3$ (b) CaO (c) $Ca(OH)_2$ (d) Ca

Ans: (a) $CaCO_3$