

BCM SCHOOL BASANT AVENUE DUGRI, LUDHIANA

CLASS 7

SUBJECT -Science

Ch-physical and chemical changes

Ch-Respiration

Q 1 c) i), iii) and iv)

Q2 (d) lactic acid only

Q 3 Assertion/Reason

(b) Both A and R are true but R is not the correct explanation of A.

Q4 (d) Assertion is false and R is true

Q5 a) Amount of CO₂ will be the highest in jar C because mice in Jar C will breathe out CO₂, which results in the accumulation CO₂ in the jar C.

b) Amount of CO₂ will be the lowest in jar A because CO₂ in jar A will be utilized by plants to breathe.

Q 6 (i) Spiracles are present on the sides of the insects' body while stomata are present on the lower surface of leaves.

(ii) Spiracles are fewer in number as compared to stomata.

(iii) Spiracles lead to an extensive network of a tracheal system which is absent in the leaves.

7. (a) A change in colour is observed: Chemical reaction between Copper sulphate solution (blue) and Iron is

Copper sulphate solution + Iron → Iron sulphate + Copper

In the above reaction, a copper sulphate solution(blue colour) reacts with an iron substance, for example, an iron nail(grey colour) and produces new chemical substances, iron sulphate solution(light green colour) and copper (brown colour) formed on the iron nail.

(b) A gas is evolved: the chemical reaction between baking soda and vinegar

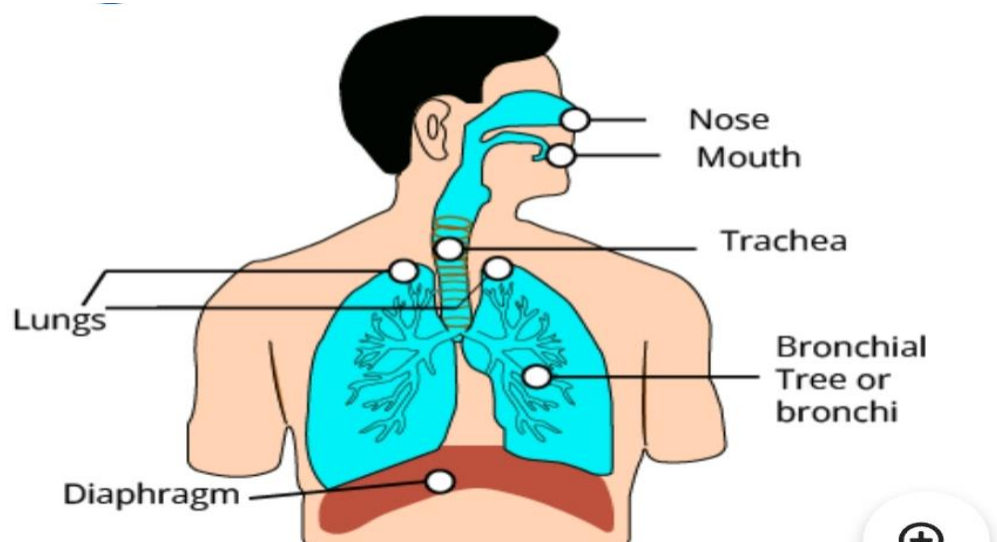
Baking soda + vinegar → sodium acetate + carbon dioxide(gas) + water

The baking soda and vinegar mixture give rise to carbon dioxide gas and two other substances.

(c) Sound is produced: Firework explosion.

Explosions of fireworks produce sound, heat, light, and gases.
8. Ripening of a fruit is a chemical change because after ripening, a new product with different properties is formed.

9.



Que 10 CASE STUDY

1. a) White

Explanation: Magnesium oxide (MgO) is formed when magnesium ribbon is burnt, which is white in color.

2. b) Chemical

Explanation: Burning magnesium ribbon involves a chemical reaction between magnesium and oxygen, resulting in the formation of magnesium oxide.

3. c) Magnesium oxide

Explanation: The chemical reaction is: $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$

4. b) Change in colour

Explanation: A change in color indicates a chemical reaction has occurred. In this case, the magnesium ribbon changes from shiny silver to white ash.