

BCM SCHOOL BASANT AVENUE DUGRI ROAD, LUDHIANA

CLASS – X

SCIENCE ASSIGNMENT (2024 – 2025)

BIO/CHEMISTRY

(ANSWER KEY)

1. (d) 4
2. (c) Nitrogen
3. (c) 'A' is true but 'R' is false.
4. (d) 'A' is false but 'R' is true.
5. The shiny brown-coloured element is Copper metal (Cu). If the metal is heated in air, it interacts with atmospheric oxygen to form copper oxide. Therefore, the black-coloured compound is copper oxide.



6. (a) The relaxation of gut muscles to move the partially digested food downwards throughout the alimentary canal is called peristaltic movement.
(b) In desert plants, stomata open at night and take in carbon dioxide (CO₂). Stomata remain closed during daytime to prevent the loss of water by transpiration. They store the CO₂ in their cells until the sun comes out so that they can carry on with photosynthesis during the daytime.
7. The following are some strategies to lessen the issue of waste disposal:

3 R's: One can lessen the issue of waste disposal by adhering to the three Rs. Reduce, reuse and recycle are the three R's. Air pollution can be decreased by people using public transportation more frequently and driving less. Plastic recycling and reuse are other options to reduce trash disposal.

Getting compost ready: You can compost all biodegradable garbage, including kitchen waste.

8. Zinc is highly reactive than copper as Zinc is placed above Hydrogen & Copper is positioned below Hydrogen in the activity series of metals. Hence Zinc reacts with HCl, whereas copper will not react.

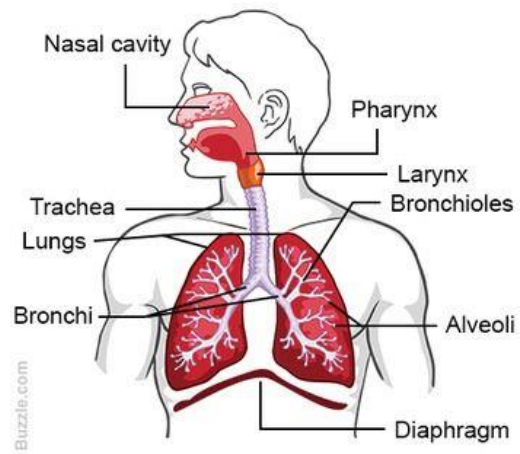
Explanations: Zinc metal is placed above hydrogen in the reactivity series and is more reactive to replace hydrogen from dilute hydrochloric acid and liberate hydrogen gas.



Copper metal is positioned below hydrogen in the reactivity series, less reactive to displace hydrogen from dilute hydrochloric acid, and no reaction occurs.



9. (a) Terrestrial organisms inspire atmospheric oxygen, while aquatic organisms thrive on the dissolved oxygen present in water. Air contains about 21% of oxygen while water has less than 1% oxygen in dissolved state. Oxygen diffuses through water at a much slower rate as compared to air. A terrestrial organism has the advantage of utilising greater amount of oxygen at a faster rate with lesser effort whereas, aquatic organisms have to put more effort to obtain the same amount of oxygen, therefore breathing in aquatic organisms is much faster than the terrestrial organisms.
(b) The labelled diagram of human respiratory system is as follows :



10. CASE STUDY

1. (d)
2. (b)
3. (c)
4. (d)
5. (a)