BCM SCHOOL BASANT AVENUE DUGRI LUDHIANA

Class – 8. Subject -Science

Answer key

MCQ

Q1 → C
Q2 → A
Q3 → C

Assertion reason
Q4 → D
Q5 → A

Questions/Answer

Q6: What is the resultant force in the above figure, and why?

Forces on left side = 8 N

Forces on right side = 8 N + 4 N = 12 N

Net force = 12 N (right) – 8 N (left) = 4 N towards right

The resultant force is 4 N towards the right because the forces on the right side are greater than the force on the left side.

Q7 (a) Why should we not let water collect anywhere in the neighbourhood?

Collected water becomes a breeding ground for mosquitoes and other insects.

This can spread diseases like malaria, dengue, and chikunguniya.

It also creates foul smell and unhygienic conditions.

We should not let water collect because it causes unhygienic conditions and spreads vector-borne diseases.

(b) Why is yeast used in baking industry?

Yeast produces carbon dioxide during fermentation.

This gas makes dough rise, making bread, cakes, and pastries soft and fluffy.

Answer: Yeast is used in baking because it ferments sugar and releases carbon dioxide which makes the dough soft and spongy.

Q8 Give reason

(a) Why is excessive irrigation harmful to the crops?

Leads to waterlogging, which reduces air in soil.

Roots cannot respire properly.

Can also wash away nutrients and cause salinity

Excessive irrigation is harmful because it reduces soil aeration and damages crop growth.

(b) Why should we grow seeds in moist soil?

Moisture helps in germination.

Dry soil cannot provide enough water for metabolic activities.

Seeds should be grown in moist soil to ensure proper germination and seedling growth.

(c) Why do we need to irrigate fields well?

Plants need water for photosynthesis, transport of nutrients, and to maintain turgidity.

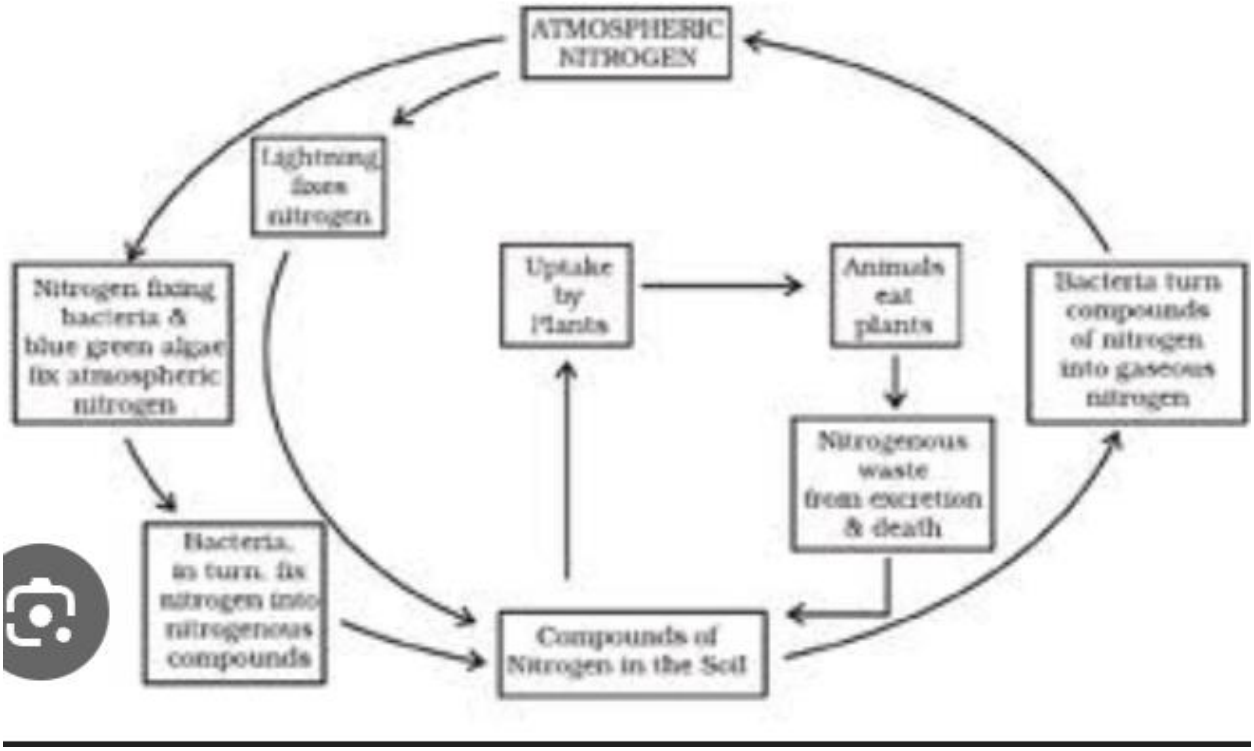
Irrigation ensures proper crop yield.

Irrigation is required to supply sufficient water for crop growth and good yield.

Q9 (a) Define nitrogen fixation.

Answer: Nitrogen fixation is the process of converting atmospheric nitrogen gas (N_2) into usable forms like ammonia, nitrates, or nitrites by bacteria (Rhizobium, Azotobacter), lightning, or industrial methods.

(b) Draw well-labelled diagram of nitrogen cycle.



Q10 Case Study: Coal & Carbonisation (4M)

(a) If carbonisation is a very slow process taking millions of years, why can't humans produce artificially in a short period of time?

Because natural conditions of high pressure and temperature over millions of years cannot be exactly replicated.

It requires geological time scale and natural processes.

Humans cannot artificially produce coal quickly because carbonisation takes millions of years under natural conditions which cannot be recreated in a short time.

(b) Which is a pure form of carbon?

Answer: Coke is a pure form of carbon.

(c) What is coal tar? Name two other products obtained from it.

Coal tar: A black, thick liquid obtained during processing of coal.

Products: Naphthalene balls, dyes, perfumes, explosives, synthetic fibres (any two).

Coal tar is a black, thick liquid. Two products obtained are naphthalene balls and dyes.

(d) How does understanding the process of carbonisation help in conserving coal resources?

It takes millions of years, we understand coal is non-renewable.

Helps us to use it wisely and find alternative energy sources.

Understanding carbonisation shows that coal is non-renewable and takes millions of years to form, so we should conserve it and use alternatives.