

Web Mentor

Basic Science

Basic science questions and knowledge.

Academic / Science

Category: Academic

Subcategory: Science

Total Questions: 21

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Question 1

What planet is known as the Red Planet?

- ☐ A) Venus
- ☐ B) Mars
- ☐ C) Jupiter
- ☐ D) Mercury

Question 2

A healthy green plant is supplied with water, minerals, chlorophyll, and sunlight, but carbon dioxide is completely removed from its surroundings. Which process will be directly affected?

- ☐ A) Respiration
- ☐ B) Germination
- ☐ C) Photosynthesis
- ☐ D) Transpiration

Question 3

A scientist blocks the xylem vessels of a plant without affecting the phloem. Which event is most likely to occur first?

- ☐ **A)** Food cannot move to roots
- ☐ **B)** Water cannot reach the leaves
- ☐ **C)** Seeds stop germinating
- ☐ **D)** Flowers stop producing pollen

Question 4

Why is iodine used after removing chlorophyll from a leaf during the starch test?

- ☐ **A)** To remove water
- ☐ **B)** To colour chlorophyll
- ☐ **C)** To detect stored starch
- ☐ **D)** To increase photosynthesis

Question 5

A cactus has very small leaves modified into spines. How does it continue to prepare food?

- ☐ **A)** Roots perform photosynthesis
- ☐ **B)** Flowers perform photosynthesis
- ☐ **C)** Green stem performs photosynthesis
- ☐ **D)** Fruits prepare food

Question 6

Which statement correctly explains why guard cells are important?

- ☐ **A)** They absorb minerals
- ☐ **B)** They manufacture starch
- ☐ **C)** They regulate the opening and closing of stomata
- ☐ **D)** They transport food

Question 7

A potted plant is placed in complete darkness for one week but watered regularly. Which statement is correct?

- ☐ **A)** Photosynthesis continues normally
- ☐ **B)** Respiration stops
- ☐ **C)** Photosynthesis stops, but respiration continues
- ☐ **D)** Both photosynthesis and respiration stop

Question 8

Which pair of processes mainly depends on stomata?

- ☐ **A)** Germination and pollination
- ☐ **B)** Photosynthesis and transpiration
- ☐ **C)** Fertilisation and seed dispersal
- ☐ **D)** Growth and flowering

Question 9

Food moves in both upward and downward directions inside plants because

- ☐ **A)** Xylem carries food
- ☐ **B)** Phloem transports food in both directions
- ☐ **C)** Guard cells push food
- ☐ **D)** Chlorophyll stores food

Question 10

A student says, 'Photosynthesis cannot occur without oxygen.' Which response is correct?

- ☐ **A)** The statement is correct
- ☐ **B)** Oxygen is required before photosynthesis begins
- ☐ **C)** Oxygen is actually produced during photosynthesis
- ☐ **D)** Oxygen is stored inside chlorophyll

Question 11

Which condition would reduce transpiration the most?

- ☐ **A)** Wide open stomata
- ☐ **B)** Bright sunlight
- ☐ **C)** Closed stomata
- ☐ **D)** High temperature

Question 12

Why is chlorophyll called an essential pigment?

- ☐ **A)** It absorbs minerals
- ☐ **B)** It absorbs sunlight needed for photosynthesis
- ☐ **C)** It transports water
- ☐ **D)** It stores oxygen

Question 13

Which process mainly helps pull water from roots to leaves?

- ☐ **A)** Pollination
- ☐ **B)** Transpiration
- ☐ **C)** Fertilisation
- ☐ **D)** Diffusion

Question 14

If phloem is damaged while xylem remains healthy, the plant will still

- ☐ **A)** Transport food normally
- ☐ **B)** Absorb water from the soil
- ☐ **C)** Distribute glucose to all parts
- ☐ **D)** Stop photosynthesis immediately

Question 15

Which observation proves that osmosis has taken place in the potato experiment?

- ☐ **A)** Potato changes colour
- ☐ **B)** Sugar solution level rises
- ☐ **C)** Water turns blue
- ☐ **D)** Potato becomes heavier due to minerals

Question 16

Which gas enters a leaf during photosynthesis but leaves the leaf during respiration?

- ☐ **A)** Carbon dioxide
- ☐ **B)** Oxygen
- ☐ **C)** Nitrogen
- ☐ **D)** Both A and B, depending on the process

Question 17

Why are root hairs numerous and very thin?

- ☐ **A)** To store starch
- ☐ **B)** To increase the surface area for water absorption
- ☐ **C)** To perform respiration
- ☐ **D)** To make chlorophyll

Question 18

Which statement about xylem is FALSE?

- ☐ **A)** It transports water
- ☐ **B)** It transports minerals
- ☐ **C)** Its movement is bidirectional
- ☐ **D)** It forms part of the vascular system

Question 19

A student removes all leaves from a plant. Which function is most immediately affected?

- ☐ **A)** Seed formation
- ☐ **B)** Food preparation
- ☐ **C)** Root growth
- ☐ **D)** Mineral absorption

Question 20

Which process releases energy stored in glucose?

- ☐ **A)** Photosynthesis
- ☐ **B)** Respiration
- ☐ **C)** Transpiration
- ☐ **D)** Osmosis

Question 21

Which statement best explains why plants need both xylem and phloem?

- ☐ **A)** Both transport only water
- ☐ **B)** Xylem transports food while phloem transports water
- ☐ **C)** Xylem transports water and minerals, while phloem distributes food throughout the plant
- ☐ **D)** Both perform photosynthesis

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