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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

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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

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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

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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

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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

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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

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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

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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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