

MockTest 10

Fuuvix

Question 1

Which of these flowers is most likely pollinated by a butterfly?

- ☐ A A flower with bright red petals and a strong scent
- ☐ B A flower with large, flat, yellow petals and a landing platform
- ☐ C A flower with tiny white petals and no scent
- ☐ D A flower with long, tubular red petals and no landing platform

Question 2

Which flower feature is MOST helpful for attracting birds to pollinate it?

- ☐ A Bright blue or purple petals
- ☐ B A strong fruity smell
- ☐ C Lots of sweet nectar
- ☐ D Tiny, clustered flowers

Question 3

Complete the sentences below by choosing the best set of words.

Statement 1: _____ is the green pigment in plant leaves that absorbs sunlight for photosynthesis.

Statement 2: Without _____, plants cannot convert light energy into chemical energy.

Statement 3: The process of photosynthesis produces _____ as a byproduct, which is released into the air.

- ☐ A Chlorophyll, Chlorophyll, Oxygen
- ☐ B Xylem, Chlorophyll, Carbon Dioxide
- ☐ C Chlorophyll, Stomata, Glucose
- ☐ D Phloem, Sunlight, Nitrogen

Question 4

During photosynthesis, plants primarily use which of the following to produce their food?

- ☐ A Oxygen from the air
- ☐ B Water from the soil and carbon dioxide from the air
- ☐ C Minerals from the soil
- ☐ D Sunlight directly as food

Question 5

Characteristic	P	Q
Produces Oxygen?	Yes	No
Requires Sunlight?	Yes	No
Occurs in Plant Cells?	Yes	Yes

Study the given table and select the option that correctly identifies processes P and Q in plants.

- ☐ A P: Photosynthesis, Q: Respiration
- ☐ B P: Transpiration, Q: Photosynthesis
- ☐ C P: Respiration, Q: Transpiration
- ☐ D P: Germination, Q: Photosynthesis

Question 6

Scenario: A plant's root hairs are damaged due to rough handling during transplantation.

What is the MOST likely effect on the plant's ability to absorb water and nutrients?

- ☐ A The plant will absorb water and nutrients more efficiently.
- ☐ B The plant's absorption of water and nutrients will decrease significantly.
- ☐ C The plant will grow taller to compensate for the damage.
- ☐ D The plant's leaves will change color immediately.

Question 7

Which of the following is a key difference between aerial roots and storage roots?

- ☐ A Aerial roots absorb water from the air, while storage roots absorb water from the soil.
- ☐ B Aerial roots help plants climb or anchor, while storage roots store nutrients like starch.
- ☐ C Aerial roots are always green, while storage roots are always brown.
- ☐ D Aerial roots grow underground, while storage roots grow above ground.

Question 8

Find the 'odd one out' in EACH group and choose the option that lists them correctly for Group 1 and Group 2.

Group 1: Potato, Strawberry, Onion, Ginger
Group 2: Bryophyllum, Spider Plant, Mint, Rose

- ☐ A Group 1: Strawberry, Group 2: Rose
- ☐ B Group 1: Onion, Group 2: Bryophyllum
- ☐ C Group 1: Ginger, Group 2: Mint
- ☐ D Group 1: Strawberry, Group 2: Bryophyllum

Question 9

Seeds that are carried by the wind often have _____ to help them float far away.

- ☐ A bright colors
- ☐ B tiny hooks
- ☐ C wings or hairs
- ☐ D hard shells

Question 10

Some seeds have tiny hooks or sticky parts so they can attach to _____ and travel to new places.

- ☐ A rocks
- ☐ B water
- ☐ C animals
- ☐ D leaves

Question 11

Which of these seeds will grow into a plant with two seed leaves?

- ☐ A Corn seed
- ☐ B Bean seed
- ☐ C Rice seed
- ☐ D Wheat seed

Question 12

Which of these shows the correct order of how a seed gets ready to grow into a plant?

- A** 1. Seed gets water, 2. Seed gets warm, 3. Seed starts to sprout
- B** 1. Seed starts to sprout, 2. Seed gets water, 3. Seed gets warm
- C** 1. Seed gets warm, 2. Seed starts to sprout, 3. Seed gets water
- D** 1. Seed gets water, 2. Seed starts to sprout, 3. Seed gets warm

Question 13

Which of these is the 'odd one out' when thinking about adaptations of desert plants?

- A** Thick, waxy cuticles
- B** Deep taproots
- C** Broad, flat leaves
- D** Reduced stomata

Question 14

Which of these is NOT an adaptation of desert plants to conserve water?

- A** Thick waxy cuticle on leaves
- B** Deep taproots to reach groundwater
- C** Broad, flat leaves to maximize sunlight absorption
- D** Reduced leaf size or spines instead of leaves

Question 15

Why do many plants growing on hills have needle-like leaves?

- A** To reduce water loss in windy conditions
- B** To attract more sunlight for photosynthesis
- C** To store extra water during rainy seasons
- D** To make it easier for animals to eat them

Question 16

How do the roots of most desert plants help them survive in dry conditions?

- A** They grow deep into the ground to reach underground water sources.
- B** They spread out widely to catch rainwater before it evaporates.
- C** They store large amounts of water like a cactus stem.
- D** They release chemicals into the soil to attract more water.

Question 17

Which of the following is a key characteristic of deciduous trees?

- A** They retain their leaves all year round.
- B** They shed their leaves seasonally.
- C** They produce cones instead of flowers.
- D** They have needle-like leaves.

Question 18

A scientist wants to study how different types of trees respond to seasonal changes. She observes three trees over a year:

- Tree A: Loses all its leaves in fall and grows new ones in spring.
- Tree B: Keeps its needle-like leaves year-round and produces cones.
- Tree C: Keeps its broad leaves year-round but does not produce cones.

Based on these observations, which tree is MOST likely a deciduous tree?

☐ A Tree A

☐ B Tree B

☐ C Tree C

☐ D None of the trees are deciduous.

Question 19

Which of the following statements about deciduous trees is INCORRECT?

☐ A They shed their leaves annually to conserve water during winter.

☐ B Their leaves often change color before falling in autumn.

☐ C They are typically cone-bearing and have needle-like leaves.

☐ D Examples include oak and maple trees.

Question 20

What is the primary function of the small, dissected leaves found in underwater aquatic plants like elodea?

☐ A To maximize sunlight absorption in low-light conditions

☐ B To reduce water resistance and allow flexible movement

☐ C To store excess water during droughts

☐ D All of the above

Question 21

Decide if each statement about Aquatic Plants is True (T) or False (F). Choose the option that shows the correct answers for all statements:

Statement 1: Fixed aquatic plants have roots anchored in the soil and leaves that float on the water's surface.

Statement 2: Floating aquatic plants do not have roots and drift freely on the water's surface.

Statement 3: Underwater plants are always rooted in the soil and never reach the water's surface.

Statement 4: All aquatic plants produce flowers above the water's surface.

☐ A 1-T, 2-T, 3-F, 4-F

☐ B 1-T, 2-F, 3-T, 4-T

☐ C 1-F, 2-T, 3-F, 4-T

☐ D 1-F, 2-F, 3-T, 4-F

Question 22

Complete the sentences below by choosing the best set of words.

Statement 1: _____ is the most widely grown cereal crop in India, primarily used for making chapati and other staple foods.

Statement 2: _____ is a major rice-producing state in India, known for its fertile delta regions.

Statement 3: _____ is a pulse crop rich in protein, commonly grown in rotation with wheat to improve soil fertility.

☐ A Wheat, Punjab, Lentils

☐ B Rice, West Bengal, Chickpeas

☐ C Wheat, West Bengal, Chickpeas

☐ D Maize, Punjab, Soybeans

Question 23

Which of the following is the correct sequence of stages in the agricultural cycle for growing rice in India?

- ☐ A Plowing → Sowing → Irrigation → Harvesting
- ☐ B Sowing → Harvesting → Plowing → Irrigation
- ☐ C Irrigation → Harvesting → Sowing → Plowing
- ☐ D Harvesting → Plowing → Irrigation → Sowing

Question 24

Scenario: A farmer in India grows rice in a field but does not add any fertilizers or manure to the soil for several seasons.

What is the MOST likely effect on the rice crop over time?

- ☐ A The rice plants will grow taller and produce more grains.
- ☐ B The soil will become richer in nutrients, improving crop yield.
- ☐ C The rice crop yield will decrease due to nutrient depletion in the soil.
- ☐ D The rice plants will develop thicker stems to store more water.

Question 25

Scenario: A plant species has evolved thick, waxy leaves in a hot, dry desert environment.

What is the MOST likely effect of this leaf adaptation?

- ☐ A The leaves will absorb more sunlight for faster growth.
- ☐ B The leaves will lose water more quickly through evaporation.
- ☐ C The leaves will reduce water loss by slowing transpiration.
- ☐ D The leaves will attract more pollinators with their shiny surface.

Question 26

Which of these states is a major producer of Rabi crops like wheat and barley?

- ☐ A Kerala
- ☐ B Punjab
- ☐ C Tamil Nadu
- ☐ D All of the above

Question 27

Complete the sentences below by choosing the best set of words.

Statement 1: The Kharif season in India typically begins with the onset of the _____ and lasts until September-October.
Statement 2: _____ is a major Kharif crop grown in India, known for its high water requirement and use in staple foods.
Statement 3: Farmers often rely on _____ to irrigate their Kharif crops when monsoon rains are insufficient.

- ☐ A monsoon, Rice, canals
- ☐ B winter, Wheat, tractors
- ☐ C summer, Cotton, fertilizers
- ☐ D monsoon, Sugarcane, wells

Question 28

Scenario: A flower has bright red petals, a tubular shape, and produces a large amount of nectar but no scent.

Which of these is the MOST likely effect of these adaptations on the flower's pollination?

- ☐ A The flower will attract more bees due to its bright color.
- ☐ B The flower will primarily be pollinated by hummingbirds.
- ☐ C The flower will rely on wind to spread its pollen.
- ☐ D The flower will repel all pollinators due to its lack of scent.

Question 29

How do parasitic plants, like dodder, obtain most of their nutrients?

- ☐ A By absorbing nutrients from the soil through their roots.
- ☐ B By trapping and digesting insects with specialized leaves.
- ☐ C By attaching to a host plant and taking nutrients from it.
- ☐ D By producing their own food through photosynthesis.

Question 30

Which of the following is a key difference between insectivorous plants and parasitic plants?

- ☐ A Insectivorous plants derive nutrients from insects, while parasitic plants derive nutrients from other plants.
- ☐ B Insectivorous plants rely on photosynthesis, while parasitic plants do not.
- ☐ C Parasitic plants have specialized traps, while insectivorous plants do not.
- ☐ D None of the above

Answers - MockTest 10

Fuuvix

Question 1

- B** A flower with large, flat, yellow petals and a landing platform

Explanation:

Butterflies are attracted to bright colors like yellow and need a flat surface to land on while feeding. The other options describe flowers adapted for hummingbirds (tubular red flowers), moths (strong scent at night), or wind pollination (tiny white flowers).

Question 2

- C** Lots of sweet nectar

Explanation:

Option c is correct because birds are attracted to flowers with abundant nectar as their primary food source.

Option a is incorrect; birds see red/yellow best, not blue/purple.

Option b is incorrect; birds have a poor sense of smell compared to insects.

Option d is incorrect; birds prefer sturdy, tubular flowers that can support their weight.

Question 3

- A** Chlorophyll, Chlorophyll, Oxygen

Explanation:

Option a is the correct answer because:

- Statement 1: 'Chlorophyll' is the green pigment in plant leaves that absorbs sunlight for photosynthesis.
- Statement 2: Without 'Chlorophyll', plants cannot convert light energy into chemical energy during photosynthesis.
- Statement 3: The process of photosynthesis produces 'Oxygen' as a byproduct, which is released into the air.

Let's see why other options are incorrect:

- Option b is incorrect because 'Xylem' is a plant tissue that transports water, not a pigment; 'Carbon Dioxide' is used in photosynthesis, not produced as a byproduct.
- Option c is incorrect because 'Stomata' are tiny openings on leaves for gas exchange, not essential for energy conversion; 'Glucose' is a product of photosynthesis, not a byproduct released into the air.
- Option d is incorrect because 'Phloem' transports sugars in plants, not involved in light absorption; 'Nitrogen' is not a byproduct of photosynthesis.

Question 4

- B** Water from the soil and carbon dioxide from the air

Explanation:

Option b is correct. Photosynthesis involves plants using water (absorbed from the soil) and carbon dioxide (from the air) to produce glucose (food) in the presence of sunlight.

Option a is incorrect; oxygen is a byproduct of photosynthesis, not a raw material.

Option c is incorrect; while minerals are important for plant growth, they are not directly used in photosynthesis.

Option d is incorrect; sunlight provides energy for the process but is not converted into food itself.

Question 5

A P: Photosynthesis, Q: Respiration

Explanation:

Based on the table:

P: Produces Oxygen (Yes), Requires Sunlight (Yes), Occurs in Plant Cells (Yes) - matches Photosynthesis (produces oxygen, requires sunlight, and occurs in plant cells).

Q: Produces Oxygen (No), Requires Sunlight (No), Occurs in Plant Cells (Yes) - matches Respiration (does not produce oxygen or require sunlight, but occurs in plant cells).

Option 'a' correctly identifies P as Photosynthesis and Q as Respiration. The other options misidentify one or both processes based on the table's characteristics.

Question 6

B The plant's absorption of water and nutrients will decrease significantly.

Explanation:

Root hairs are tiny extensions of root cells that greatly increase the surface area for absorption of water and nutrients. If they are damaged, the plant's ability to absorb these essential resources will decrease significantly. The other options are not logical consequences of root hair damage; efficiency cannot improve, height growth is unrelated, and leaf color change would be a delayed or indirect effect, not immediate.

Question 7

B Aerial roots help plants climb or anchor, while storage roots store nutrients like starch.

Explanation:

Option b is correct. Aerial roots (e.g., in ivy or orchids) provide support or absorb moisture from air, while storage roots (e.g., carrots or beets) store nutrients.

Option a is incorrect; both root types can absorb water from soil, and aerial roots primarily focus on air moisture/ support.

Option c is incorrect; color is not a defining feature (e.g., some aerial roots are brown, storage roots vary in color).

Option d is incorrect; it reverses the typical growth locations (aerial roots grow above ground, storage roots are usually underground).

Question 8

D Group 1: Strawberry, Group 2: Bryophyllum

Explanation:

In Group 1, 'Strawberry' is the odd one out because Potato, Onion, and Ginger reproduce vegetatively through underground structures (tubers, bulbs, and rhizomes, respectively), while Strawberry reproduces through runners (above-ground stems).

In Group 2, 'Bryophyllum' is the odd one out because Spider Plant and Mint reproduce through runners or stolons, and Rose can be propagated through cuttings, while Bryophyllum reproduces through leaf buds (plantlets on leaf margins).

Question 9

C wings or hairs

Explanation:

Seeds dispersed by wind usually have wings or hairs (like dandelions) to catch the air and travel far. Bright colors attract animals, hooks attach to fur, and hard shells protect seeds from digestion—none help with wind dispersal.

Question 10

C animals

Explanation:

Seeds with hooks or sticky parts attach to animals' fur or feathers, helping them spread to new areas. This is called animal dispersal.

Question 11

B Bean seed

Explanation:

Option b is correct because bean seeds are dicots, which grow into plants with two seed leaves (cotyledons).

Option a is incorrect; corn is a monocot and grows with one seed leaf.

Option c is incorrect; rice is also a monocot with one seed leaf.

Option d is incorrect; wheat is another monocot with one seed leaf.

Question 12

A

1. Seed gets water; 2. Seed gets warm; 3. Seed starts to sprout

Explanation:

First, a seed needs water to soften its shell. Then, it needs warmth to wake up the baby plant inside. Finally, the seed starts to sprout and grow. The correct order is water, warmth, sprout.

Question 13

C

- Broad, flat leaves

Explanation:

Thick cuticles, deep taproots, and reduced stomata are all adaptations desert plants use to conserve water. Broad, flat leaves are typically found in plants that live in wetter environments because they lose water quickly, making them the odd one out.

Question 14

C

- Broad, flat leaves to maximize sunlight absorption

Explanation:

Desert plants have evolved several adaptations to conserve water, such as a thick waxy cuticle to reduce evaporation, deep taproots to access water, and reduced leaf size or spines to minimize water loss. Broad, flat leaves, however, would increase water loss through transpiration and are not an adaptation for desert conditions. Therefore, 'Broad, flat leaves to maximize sunlight absorption' is the option that is NOT an adaptation for water conservation in desert plants.

Question 15

A

- To reduce water loss in windy conditions

Explanation:

Option a is correct because needle-like leaves have a smaller surface area, which helps reduce water loss in windy and dry hill conditions.

Option b is incorrect; needle-like leaves don't attract more sunlight—broad leaves would be better for that purpose.

Option c is incorrect; needle-like leaves are not adapted for water storage—succulent plants have thick tissues for that.

Option d is incorrect; needle-like leaves often deter animals due to their toughness or sharpness.

Question 16

A

- They grow deep into the ground to reach underground water sources.

Explanation:

Option a is correct because desert plants often have deep root systems to access water far below the dry surface.

Option b is incorrect; while some desert plants may have shallow roots to catch rainwater, deep roots are more common for long-term survival.

Option c is incorrect; roots do not store water—this is the role of stems or leaves in some plants (like cacti).

Option d is incorrect; roots absorb water but do not chemically attract it.

Question 17

B

- They shed their leaves seasonally.

Explanation:

Option b is correct. Deciduous trees are known for shedding their leaves seasonally, usually in the fall.

Option a describes evergreen trees, not deciduous ones.

Option c describes coniferous trees, which are often evergreen.

Option d is a characteristic of many coniferous trees, not deciduous trees, which typically have broad, flat leaves.

Question 18

A

- Tree A

Explanation:

Deciduous trees shed their leaves seasonally (usually in fall) and regrow them in spring. Tree A fits this description. Tree B is a coniferous tree (needles and cones), and Tree C is an evergreen (retains leaves but doesn't produce cones).

Question 19

C

- They are typically cone-bearing and have needle-like leaves.

Explanation:

Deciduous trees are characterized by shedding their leaves annually (option a) and often display color changes in autumn (option b). Examples like oak and maple (option d) are correct. However, cone-bearing trees with needle-like leaves describe coniferous trees, not deciduous ones, making option c the INCORRECT statement.

Question 20

- B** To reduce water resistance and allow flexible movement

Explanation:

Underwater plants like elodea have small, dissected leaves primarily to minimize water resistance, allowing them to sway with water currents without damage. While sunlight absorption (option a) is important, their leaf shape is not mainly for this purpose. They do not store water (option c) as they live submerged. 'All of the above' (option d) is incorrect because only option b is unequivocally true.

Question 21

- A** 1-T, 2-T, 3-F, 4-F

Explanation:

Statement 1 is True: Fixed aquatic plants (e.g., water lilies) have roots in the soil and leaves on the surface.

Statement 2 is True: Floating plants (e.g., duckweed) lack roots and drift freely.

Statement 3 is False: Some underwater plants (e.g., eelgrass) are rooted but may have parts reaching the surface.

Statement 4 is False: Not all aquatic plants flower above water; some (e.g., hydrilla) flower underwater.

Question 22

- C** Wheat, West Bengal, Chickpeas

Explanation:

Option c is the correct answer because:

- Statement 1: 'Wheat' is the most widely grown cereal crop in India, forming the base of staple foods like chapati.
- Statement 2: 'West Bengal' is a major rice-producing state due to its fertile Gangetic delta.
- Statement 3: 'Chickpeas' (or chana) are protein-rich pulses often grown in rotation with wheat to replenish soil nitrogen.

Why other options are incorrect:

- Option a is incorrect because while 'Wheat' is correct, 'Punjab' is more famous for wheat than rice, and 'Lentils' (dal) are not typically grown in rotation with wheat.
- Option b is incorrect because 'Rice' is not the most widely grown cereal (wheat is), though 'West Bengal' is correct for rice production.
- Option d is incorrect because 'Maize' is not India's primary cereal crop, and 'Soybeans' are oilseeds, not commonly rotated with wheat.

Question 23

- A** Plowing → Sowing → Irrigation → Harvesting

Explanation:

The correct sequence is Option A. Rice cultivation begins with plowing to prepare the soil, followed by sowing the seeds. Irrigation is then required to keep the fields flooded, as rice grows best in waterlogged conditions. Finally, the crop is harvested when mature.

Option B is incorrect because harvesting cannot occur before plowing and sowing.

Option C is incorrect because irrigation is not the first step, and harvesting cannot happen before sowing.

Option D is incorrect because harvesting cannot be the first stage in the cycle.

Question 24

- C** The rice crop yield will decrease due to nutrient depletion in the soil.

Explanation:

Rice, like all crops, requires nutrients from the soil to grow. Without replenishing these nutrients through fertilizers or manure, the soil becomes depleted over time. The most direct effect is a decrease in crop yield due to the lack of essential nutrients. The other options are incorrect because nutrient depletion does not lead to taller plants, richer soil, or thicker stems—these are unrelated or opposite effects.

Question 25

- C** The leaves will reduce water loss by slowing transpiration.

Explanation:

Thick, waxy leaves (like those of cacti) are a common desert adaptation. The waxy cuticle acts as a barrier to reduce water loss through transpiration, which is critical in arid environments. The other options are incorrect: desert plants typically avoid excessive sunlight absorption (to prevent overheating), and waxy leaves do not increase evaporation or primarily serve to attract pollinators.

Question 26

- B** Punjab

Explanation:

Punjab is a leading producer of Rabi crops due to its fertile plains and irrigation facilities. Kerala and Tamil Nadu focus more on Kharif crops like rice. Thus, 'Punjab' is correct.

Question 27

- A** monsoon, Rice, canals

Explanation:

Option a is correct because:

- Statement 1: The Kharif season starts with the 'monsoon' rains in India.
- Statement 2: 'Rice' is a primary Kharif crop requiring abundant water.
- Statement 3: 'Canals' are commonly used for irrigation during monsoon shortages.

Other options are incorrect because:

- Option b: 'Winter' is incorrect for Kharif season (it's Rabi season); 'Wheat' is a Rabi crop.
- Option c: 'Summer' is incorrect (Kharif is monsoon-dependent); 'Fertilizers' aid growth but don't replace irrigation.
- Option d: While 'monsoon' is correct, 'Sugarcane' is grown year-round, and 'wells' are less scalable than canals for large-scale irrigation.

Question 28

- B** The flower will primarily be pollinated by hummingbirds.

Explanation:

Bright red color, tubular shape, and abundant nectar are classic adaptations for bird pollination (e.g., hummingbirds). Birds have poor smell but are attracted to red and can access nectar in tubular flowers. Bees are less likely to pollinate such flowers as they prefer blue/yellow colors and rely on scent. Wind-pollinated flowers lack showy petals and nectar.

Question 29

- C** By attaching to a host plant and taking nutrients from it.

Explanation:

Option c is correct. Parasitic plants like dodder attach to a host plant using structures called haustoria to absorb water and nutrients.

Option a is incorrect; parasitic plants do not rely on soil nutrients like most plants.

Option b is incorrect; this describes insectivorous plants, not parasitic ones.

Option d is incorrect; many parasitic plants have reduced or no chlorophyll and cannot photosynthesize effectively.

Question 30

- A** Insectivorous plants derive nutrients from insects, while parasitic plants derive nutrients from other plants.

Explanation:

The key difference is that insectivorous plants obtain nutrients by trapping and digesting insects, while parasitic plants extract nutrients from other living plants. Option b is incorrect because both types can perform photosynthesis (though parasitic plants often reduce this ability). Option c is incorrect because insectivorous plants, not parasitic ones, have specialized traps. 'None of the above' is incorrect because option a is definitively correct.