Sample 1: Reading Passage 2

Deadly Appetites

You should spend about 20 minutes on Questions 14–26, which are based on Reading Passage 2 below.

Section A

To many people, plants appear as passive organisms, dependent on sunlight, water, and minerals obtained from the soil. Yet a small group of species has adopted a remarkably different strategy. Carnivorous plants supplement their nutrition by capturing and digesting living organisms, most commonly insects. These species are typically found in habitats where essential nutrients are in short supply. In nutrient-poor bogs, marshes, and sandy wetlands, the ability to obtain nitrogen and phosphorus from prey can provide a significant advantage. Although their methods vary considerably, all carnivorous plants face the same problem: attracting, capturing, and digesting prey while remaining rooted in one place.

Section B

The first scientific investigations into carnivorous plants were often greeted with scepticism. During the nineteenth century, some botanists refused to believe that plants could actively obtain nutrients from animals. The debate was settled only after a series of carefully controlled experiments demonstrated that trapped insects were digested and absorbed by the plants themselves. Modern research has revealed an even more surprising finding. Genetic evidence suggests that carnivory did not evolve once but emerged independently in several unrelated groups of plants. Similar environmental pressures appear to have driven different species toward comparable solutions.

Section C

One of the most widespread trapping strategies relies on adhesive surfaces. Sundews, for example, produce leaves covered with glandular tentacles that secrete droplets of sticky fluid. To an approaching insect, these droplets resemble nectar. Once contact occurs, escape becomes increasingly difficult. The insect's movements stimulate neighbouring tentacles to bend inward, gradually increasing the effectiveness of the trap. However, this mechanism is relatively slow and is most successful against small prey. Larger insects may occasionally escape before the leaf has fully responded.

Section D

A more dramatic approach is employed by the Venus flytrap. Each trap consists of two modified leaf lobes equipped with sensitive trigger hairs. Researchers discovered that a single touch is

usually insufficient to activate the trap. Instead, two contacts must occur within a short period. This requirement helps prevent unnecessary closure caused by falling raindrops or wind-blown debris. Once triggered, an electrical signal spreads across the leaf, causing the trap to snap shut. The entire movement can occur in less than a second. Nevertheless, not every capture attempt succeeds. Tiny insects may sometimes slip through the gaps between the trap's marginal teeth.

Section E

Pitcher plants use an entirely different strategy. Their leaves form deep chambers containing digestive liquid. Bright colours, sweet secretions, and distinctive scents attract insects to the opening. In many species, the rim becomes extremely slippery when wet, increasing the likelihood that visitors will fall inside. Some tropical pitcher plants have developed unusual relationships with animals. Rather than digesting every visitor, certain species benefit from nutrients deposited by small mammals or birds that regularly visit the pitchers. Such arrangements demonstrate that carnivorous plants do not always obtain nutrients through direct predation alone.

Section F

Among the most sophisticated traps are those of bladderworts, aquatic plants that capture microscopic organisms. Their bladder-like traps maintain an internal pressure lower than that of the surrounding water. When tiny trigger hairs are disturbed, a trap door opens inward and water rushes inside, carrying prey with it. The door immediately closes again. High-speed recordings have shown that this sequence occurs so rapidly that it is difficult to observe without specialised equipment. Some scientists consider it one of the fastest movements known in the biological world.

Section G

Capturing prey is only part of the process. Digestion requires specialised enzymes capable of breaking down proteins and other organic compounds. In several species, however, the task is shared with microorganisms living within the trap. Bacteria and microscopic fungi help decompose prey remains, releasing nutrients that the plant can subsequently absorb. Researchers have described these communities as miniature ecosystems, containing numerous interacting organisms. Without such assistance, some plants would digest prey less efficiently.

Section H

Recent studies have challenged long-standing assumptions about plant behaviour. Experiments suggest that certain carnivorous plants can distinguish between living prey and non-living objects. In one investigation, plants exposed to repeated non-food stimuli gradually reduced their responses, conserving energy that would otherwise have been wasted. Other species appear capable of altering enzyme production according to the size or type of prey captured.

These findings have encouraged scientists to reconsider the complexity of plant responses to environmental information.

Section I

Despite their remarkable adaptations, many carnivorous plants are increasingly threatened. Wetland drainage, urban expansion, agricultural development, and pollution have reduced suitable habitats across large areas of the world. Illegal collection also remains a concern, particularly for rare species sought by private collectors. In response, conservation groups have established protected reserves and cultivation programmes designed to reduce pressure on wild populations. Researchers hope that public education initiatives will further support long-term preservation efforts.

Questions 14-18
Complete the notes below. Choose NO MORE THAN TWO WORDS from the passage for each answer.

Carnivorous Plants

- Carnivorous plants are commonly found in habitats where 14 _____ are scarce.
- Research indicates that carnivory developed independently in several 15 _____.
- Sundews attract insects using droplets that resemble 16 _____.
- The Venus flytrap requires more than one contact with its 17 _____ before closing.
- Bladderwort traps function because of differences in 18 _____.

Questions 19-22
Look at the following statements (Questions 19-22) and match each statement with the correct plant from A-E. Write the correct letter, A–E, in boxes 19-22 on your answer sheet.

List of Plants
A. Sundew
B. Venus flytrap
C. Pitcher plant
D. Bladderwort
E. More than one of the above

Statements

19. It may obtain nutrients without directly consuming animals.
20. Its trapping mechanism is considered exceptionally fast.
21. It uses a sticky substance to retain prey.
22. It may fail to capture prey because of the prey's small size.

Questions 23-26

Reading Passage 2 has nine paragraphs, A-I. Which paragraph contains the following information?

Write the correct letter, A–I, in boxes 23-26 on your answer sheet.

23. A reference to scientists questioning an earlier belief
24. An example of organisms assisting the digestive process
25. Evidence that plants can modify their behaviour to avoid wasting energy
26. measures intended to reduce threats to wild populations

ANSWER KEY
14. essential nutrients
15. unrelated groups
16. nectar
17. trigger hairs
18. internal pressure
19. C
20. D
21. A
22. B
23. B
24. G
25. H
26. I

Sample 2: Reading Passage 2

Silent Hunters

You should spend about 20 minutes on Questions 14–26, which are based on Reading Passage 2 below.

Section A
The idea that plants can behave as predators once seemed implausible to many scientists. Plants were traditionally regarded as passive organisms, dependent upon sunlight and soil nutrients for survival. However, in certain environments, particularly nutrient-poor wetlands, bogs, and sandy heathlands, some species have evolved an alternative strategy. These carnivorous plants obtain part of their nutritional requirements from insects and other small animals. While the habitats they occupy are often rich in sunlight and water, they are frequently deficient in nitrogen and phosphorus, two elements essential for plant growth. Carnivory allows these plants to compensate for this deficiency.

Section B

Early reports describing insect-eating plants were often dismissed as exaggerations. During the nineteenth century, several botanists argued that insects found on carnivorous plants were merely accidental victims. This view began to change when researchers conducted experiments demonstrating that plants absorbed nutrients released from prey. More recently, advances in molecular biology have transformed understanding of the origins of carnivory. Scientists now believe that the ability to trap and digest animals evolved independently in multiple plant lineages rather than originating from a single ancestor. This finding represents one of the most striking examples of convergent evolution in the plant kingdom.

Section C

Among the simplest trapping mechanisms are those employed by sundews. Their leaves are covered with numerous tentacles tipped with droplets of sticky secretion. These droplets reflect light and resemble nectar, attracting unsuspecting insects. Once prey lands on the leaf, it becomes entangled in the adhesive substance. Mechanical stimulation then causes nearby tentacles to bend toward the victim. Although the process may take several minutes, the gradual movement significantly increases the likelihood of successful capture. Nevertheless, particularly strong insects occasionally manage to escape before the trap closes completely.

Section D

The Venus flytrap uses a more rapid and selective approach. Each trap consists of two hinged lobes lined with trigger hairs. Research has shown that the trap closes only when at least two stimulations occur within a limited period. This requirement reduces the risk of responding to non-prey stimuli such as raindrops. Once activated, electrical impulses spread across the leaf surface, causing an abrupt change in cell pressure. The trap snaps shut in less than a second. Yet speed alone does not guarantee success. Very small insects may pass through the spaces between the marginal spines before digestion begins.

Section E

Pitcher plants rely on a passive trapping system. Their modified leaves form deep containers partially filled with digestive fluid. Insects are attracted by bright pigmentation, nectar production, and aromatic compounds. After landing near the opening, prey often slips on the smooth inner surface and falls into the liquid below. Some tropical species possess pitchers large enough to capture frogs, lizards, and even small mammals. Interestingly, researchers have documented species that derive nutrients from animals without trapping them. Certain mammals regularly feed on nectar produced by the plant and deposit nutrient-rich waste into the pitcher, creating a mutually beneficial relationship.

Section F

Bladderworts represent a highly specialised group of aquatic carnivorous plants. Their traps resemble tiny bladders maintained under negative pressure. When microscopic animals disturb sensitive hairs near the entrance, a flexible door opens inward. Water and prey are immediately sucked into the trap chamber. High-speed imaging has revealed that this sequence may occur

within a fraction of a millisecond. Because of its extraordinary speed, the mechanism has attracted considerable interest from engineers studying biological models for rapid movement systems.

Section G

Although capture mechanisms differ, digestion presents a common challenge. Carnivorous plants produce enzymes capable of breaking down proteins, fats, and other biological materials. However, digestion is not always performed by the plant alone. Studies of several pitcher plant species have revealed complex communities of bacteria, protozoa, and microscopic fungi living within the traps. These organisms assist in decomposing prey remains, thereby accelerating nutrient release. Researchers have compared these miniature ecosystems to those found in ponds, despite existing within a single leaf.

Section H

Recent investigations have challenged assumptions about plant behaviour and responsiveness. Experiments suggest that some carnivorous plants can discriminate between meaningful and meaningless stimuli. In one study, repeated contact that did not result in prey capture eventually produced a reduced response, thereby conserving energy. Other experiments indicate that digestive activity may vary according to the quantity of prey captured. Such findings do not imply intelligence in the conventional sense, but they demonstrate a degree of physiological flexibility previously considered unlikely in plants.

Section I

Despite their remarkable adaptations, many carnivorous plants face increasing threats. Wetland drainage, pollution, agricultural expansion, and climate change have reduced suitable habitats across numerous regions. Illegal collection for the horticultural trade further endangers some rare species. Conservation efforts now focus on habitat restoration, legal protection, and cultivation programmes designed to reduce pressure on wild populations. Scientists also emphasise public education, arguing that long-term conservation depends upon greater awareness of the ecological importance of these unusual plants.

Questions 14-18

Complete the notes below. Choose NO MORE THAN TWO WORDS from the passage for each answer.

Carnivorous Plant Adaptations

Carnivorous plants commonly occur in habitats lacking sufficient 14 _____.
According to modern research, carnivory evolved independently in several 15 _____.
The droplets produced by sundews resemble 16 _____ and attract insects.

The Venus flytrap responds only after multiple stimulations of its 17 _____.
Bladderwort traps operate because they are maintained under 18 _____.

Questions 19-22
Look at the following statements (Questions 19-22) and the list of plants below.

Match each statement with the correct plant, A-E. Write the correct letter, A-E, in boxes 19–22 on your answer sheet.

List of Plants
A. Sundew
B. Venus flytrap
C. Pitcher plant
D. Bladderwort
E. More than one of the above

Statements
19. It may benefit nutritionally from animals without consuming them.
20. It uses one of the fastest trapping mechanisms known among plants.
21. Its trapping process becomes more effective through gradual movement.
22. It may lose prey because of gaps within the trap structure.

Questions 23–26

Reading Passage 2 has nine paragraphs, A-I. Which paragraph contains the following information? Write the correct letter, A-I, in boxes 23-26 on your answer sheet.

23. A reference to scientific evidence that changed an earlier viewpoint
24. A comparison between a plant habitat and a larger natural environment
25. Evidence that some plants reduce unnecessary energy expenditure
26. Examples of actions intended to preserve threatened species

ANSWER KEY

14. nitrogen and phosphorus
15. plant lineages
16. nectar
17. trigger hairs
18. negative pressure
19. C
20. D
21. A
22. B
23. B

24. G
25. H
26. I