

Golden Knowledge Multiple Choice Question sheet: Topic 7: Ecology (TRILOGY COURSE)

Use the table below to help you identify which questions are for each lesson / section of learning within this topic:

Lesson Ref	Specification ref (Trilogy)	Lesson content	Question numbers
B16.1	7.1.1	The importance of communities	1-8
B16.2	7.1.1	Organisms in their environment	9-12
B16.4	7.1.2	Competition in animals	13-17
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B16.6	7.1.4	Adapt and survive	18-22
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1. What term describes the different levels of organization within an ecosystem, from individual organisms to the entire ecosystem?
 - a) Ecological niches
 - b) Ecosystem diversity
 - c) Levels of interaction
 - d) Food chains
2. Why is interdependence important in a community?
 - a) It leads to competition for resources
 - b) It allows organisms to live independently
 - c) It reduces the need for adaptation
 - d) It disrupts the balance within the community
3. What are organisms typically competing for in a habitat?
 - a) Shelter and sunlight
 - b) Air and water
 - c) Nutrients and mates
 - d) Precipitation and temperature

4. How are organisms adapted to the conditions in which they live?
 - a) By avoiding competition
 - b) Through random mutations
 - c) Through natural selection
 - d) By remaining isolated

5. Which term refers to a community of living organisms and their interactions with their environment?
 - a) Biosphere
 - b) Biome
 - c) Ecosystem
 - d) Population

6. Why do organisms need materials from their surroundings and other living organisms?
 - a) To create new habitats
 - b) To develop new adaptations
 - c) To survive and reproduce
 - d) To reduce competition

7. What can happen to a community if one species is removed from a habitat?
 - a) It has no impact on the community
 - b) It leads to the growth of other species
 - c) It doesn't affect the balance
 - d) It can disrupt the whole community

8. In a stable community, what remains fairly constant?
 - a) Species interactions
 - b) Temperature and precipitation
 - c) Population sizes of different species
 - d) The rate of extinction

9. What is the primary outcome of the competition between plants in a community or habitat?
 - a) Increased cooperation among plant species
 - b) Enhanced growth of all plant species involved
 - c) The survival and successful reproduction of certain plant species
 - d) Decreased dependence on resources

10. Why do animals in a community or habitat often compete with each other?
 - a) To establish social hierarchies
 - b) To form symbiotic relationships
 - c) To reduce predation risk
 - d) To secure limited resources such as food and territory

11. In a community, why do different species depend on each other for resources?
 - a) To increase competition and reduce overall species diversity
 - b) To create an ecosystem with fewer interconnections
 - c) To promote individual species self-sufficiency
 - d) To maintain a balance and support the well-being of various species

12. How would you define interdependence in a biological context?
 - a) The competition among different species for resources
 - b) The mutual dependence of different species on each other for resources
 - c) The individual self-sufficiency of species in a community
 - d) The isolation of species from other species in a habitat

13. How can a change in an abiotic factor affect a community?
- It leads to an increase in the population of species in the community.
 - It causes a decline in the diversity of species in the community.
 - It results in the emergence of new abiotic factors.
 - It has no impact on the community's biotic factors.
14. What is the primary characteristic of abiotic factors in a community?
- They directly influence the population growth of species.
 - They are responsible for the competition among species.
 - They provide resources for the community.
 - They are non-living factors that affect the community.
15. How might a change in a biotic factor affect a community?
- It leads to the extinction of abiotic factors.
 - It can trigger a shift in the community's abiotic factors.
 - It has no influence on the abiotic factors.
 - It can alter the population dynamics and interactions among species.
16. What is the defining characteristic of biotic factors in a community?
- They are organisms that do not contribute to the community's dynamics.
 - They include only abiotic elements that influence the environment.
 - They are living factors that affect the community.
 - They primarily consist of non-living elements.
17. When are the numbers of a population considered insufficient for breeding to occur?
- When the abiotic factors are stable.
 - When there is a surplus of biotic factors.
 - When the population is too small to ensure successful reproduction.
 - When there is a balance between abiotic and biotic factors.
18. What does an organism's adaptation to its natural environment involve?
- Altering the environment to suit the organism's needs.
 - Changing its natural habitat to better fit its requirements.
 - Evolving traits that help it survive in its usual surroundings.
 - Relocating to a completely different environment.
19. Why do organisms possess adaptations?
- To make them more appealing to potential mates.
 - To live exclusively in controlled environments.
 - To enable them to thrive in their normal living conditions.
 - To ensure they can adapt rapidly to any environment.
20. Which statement accurately describes the different types of adaptation?
- All adaptations involve changes at the genetic level.
 - Adaptations can only be physical in nature.
 - Organisms can exhibit various types of adaptations, including physical, behavioural, and physiological.
 - Adaptations only occur in extremophiles.
21. What characterizes extremophiles?
- They are organisms that are extremely aggressive.
 - They live in conventional, non-extreme environments.
 - Extremophiles are organisms that thrive in very harsh and extreme conditions.
 - They can adapt to any environment easily.

22. In which type of environment can you find extremophiles such as bacteria living in deep-sea vents?
- Typical and moderate environmental conditions.
 - Polar regions with cold temperatures.
 - Volcanic craters.
 - Very extreme and harsh conditions.
29. What is the primary purpose of methods used to determine the distribution and abundance of species in an ecosystem?
- To predict future changes in species populations.
 - To precisely count the total number of species.
 - To evaluate the effectiveness of predator-prey relationships.
 - To assess where and how many individuals of a species are found in an area.
30. When a population rises and falls in a cyclic manner, it is usually due to:
- Environmental disturbances leading to extinction.
 - Seasonal or periodic changes in factors like food availability or weather.
 - Genetic mutations causing rapid changes in population size.
 - Random chance events in small populations.
31. In a stable community, what happens to population sizes over time?
- Populations continuously increase.
 - Populations remain at a constant size.
 - Populations experience irregular and unpredictable changes.
 - Populations rise and fall periodically, maintaining relative stability.
32. What is the purpose of using a quadrat in ecological studies?
- To calculate the population size of animals.
 - To measure the height of trees.
 - To estimate the population size and distribution of plants.
 - To capture and relocate insects.
33. How is a transect used in the field of ecology?
- To measure the thickness of tree trunks.
 - To collect water samples from a river.
 - To observe changes in vegetation over a specific line or path.
 - To estimate the number of animal species in a habitat.
34. In ecological research, what is the significance of generating random coordinates?
- To determine the geographic location of the research team.
 - To provide a GPS reference for the study area.
 - To ensure that data collection is unbiased and representative.
 - To establish boundaries for a protected wildlife area.
35. How is percentage coverage of a plant species calculated in a habitat?
- By measuring the total height of the plants.
 - By estimating the weight of plant leaves.
 - By counting the number of individual plants.
 - By visually determining the proportion of ground covered by the species.
36. What does comparing plant distribution from one habitat to another help researchers understand?
- The height of trees in each habitat.
 - The average temperature of the habitats.
 - The differences in plant populations and communities.
 - The population size of animals in the habitats.

37. What is the primary purpose of measuring the population size of a common species in a habitat?
- To eradicate the species from the habitat.
 - To ensure the species is protected and not harmed.
 - To evaluate the overall health of the habitat.
 - To gather data for scientific research.
38. Why might sampling techniques be used to investigate the effect of a factor on the distribution of a species?
- To eliminate the species from the habitat.
 - To save time and reduce the cost of the research.
 - To ensure that every individual of the species is counted.
 - To obtain a representative estimate of the population.
39. In ecological research, what is the significance of understanding the distribution of a species within a habitat?
- It helps protect the species from predators.
 - It is primarily used for identifying new species.
 - It aids in understanding how the species interacts with its environment.
 - It ensures an even distribution of resources in the habitat.
40. Which of the following is a reason for using sampling techniques in population studies?
- To count every single individual in the population.
 - To increase the likelihood of discovering rare species.
 - To ensure that the results are statistically significant.
 - To reduce the size of the habitat being studied.
41. What is the significance of investigating the effect of a factor on the distribution of a species in a habitat?
- It helps determine the precise locations of all species in the habitat.
 - It assists in assessing the impact of environmental changes on the species.
 - It is primarily used for studying individual behaviour within the species.
 - It allows for controlled breeding of the species.
42. Which of the following is a potential factor that might be investigated for its effect on the distribution of a species?
- The number of predator species in the habitat.
 - The temperature in the habitat.
 - The rate of water flow in nearby rivers.
 - The density of plants in the habitat.
43. In scientific research, why is it important to measure the population size of a common species?
- To reduce the species' population.
 - To increase the chance of discovering rare species.
 - To eliminate the species from the habitat.
 - To gather baseline data for further study.
44. What are sampling techniques primarily used for in ecological studies?
- To obtain an accurate count of every individual in the population.
 - To save time and minimize data collection.
 - To protect endangered species from harm.
 - To estimate population sizes and distributions efficiently.
45. How are animals in hot deserts typically adapted to their environment?
- They have thick fur for insulation.
 - They are nocturnal to avoid the heat.
 - They hibernate during the day.

46. What is a common adaptation of animals in cold deserts like the Arctic?
- They have long, thin legs for running.
 - They are small and lightweight.
 - They are predominantly nocturnal.
47. How do animals that live underground, such as burrowing mammals, adapt to their environment?
- They have sharp claws for climbing trees.
 - They are good swimmers.
 - They have long tails for balance.
48. Animals that use camouflage as an adaptation often have:
- Bright and contrasting colours.
 - Large size for intimidation.
 - Loud vocal calls to ward off predators.
49. How do animals that change their behaviour, like stalking prey, adapt to their environment?
- They sleep during the day.
 - They rely on cooperative hunting.
 - They are highly social animals.
50. How are plants in hot deserts typically adapted to their environment?
- They have broad, flat leaves to catch rainwater.
 - They have thick, waxy cuticles to reduce water loss.
 - They rely on frequent rainfall for survival.
 - They have colourful flowers to attract pollinators.
51. What is a common adaptation of plants in sand dunes?
- They have deep taproots to reach water.
 - They thrive in areas with regular flooding.
 - They have large, fleshy leaves to store water.
 - They rely on symbiotic fungi for nutrients.
52. How do plants in tropical rainforests adapt to their environment?
- They have small, needle-like leaves to minimize water loss.
 - They rely on seasonal changes in temperature.
 - They grow tall to reach sunlight in the dense canopy.
 - They have extensive root systems for anchoring in strong winds.
53. Carnivorous plants often have unique adaptations, what does this include?
- Broad leaves for maximum photosynthesis.
 - Specialized enzymes for digesting insects.
 - Mutualistic relationships with pollinators.
 - Rapid growth in response to touch.
54. How are plants adapted to protect themselves?
- Developing flowers for protection.
 - Rapidly closing their leaves when touched.
 - Emitting strong fragrances to attract pollinators.
 - Growing large, colourful fruits.
55. Which organisms are typically categorized as producers in an ecosystem?
- Primary consumers
 - Tertiary consumers
 - Decomposers
 - Organisms that photosynthesize

56. How is biomass primarily produced in an ecosystem?
- Through decomposition of dead organisms
 - Through herbivores consuming producers
 - By direct absorption from the environment
 - By photosynthesis carried out by producers
57. How can feeding relationships within a community be best represented?
- Through weather patterns
 - Through population densities
 - By a food pyramid
 - By a food chain
58. In a typical food chain, where does every food chain begin?
- With tertiary consumers
 - With herbivores
 - With carnivores
 - With producers
59. What is the role of producers in a food chain?
- To consume primary consumers
 - To provide energy for all other trophic levels
 - To decompose dead organisms
 - To control the climate of the ecosystem
60. Which term best defines an organism that hunts and consumes other organisms for food?
- Producer
 - Consumer
 - Predator
 - Prey
61. In a food chain, primary consumers are typically:
- Predators
 - Decomposers
 - Prey
 - Producers
62. What is the term for organisms that consume primary consumers in a food chain?
- Producers
 - Tertiary consumers
 - Herbivores
 - Predators
63. What concept involves the recycling of various materials through both the abiotic and biotic components of an ecosystem?
- Photosynthesis
 - Biomagnification
 - The nitrogen cycle
 - The cycling of materials
64. Why is the carbon cycle important to living organisms in an ecosystem?
- It helps plants grow faster
 - It provides a constant source of energy for animals
 - It maintains the balance of atmospheric gases needed for respiration
 - It prevents excess carbon from accumulating in the environment
65. How does the water cycle benefit plants and animals on land in an ecosystem?
- It directly provides water for plant growth
 - It regulates temperature, making the environment more suitable
 - It converts water into essential nutrients for plants and animals
 - It enhances air quality, promoting animal respiration

66. Which statement accurately describes the cycling of materials in the living world?
- Materials are used once and then discarded.
 - Materials are consumed by living organisms and never returned to the environment.
 - All materials are recycled through various living and non-living components.
 - Recycling of materials only occurs in aquatic ecosystems.
67. What role do microorganisms play in the cycling of materials through an ecosystem?
- Microorganisms are consumers, reducing materials in the environment.
 - Microorganisms release excess materials into the environment.
 - Microorganisms break down and decompose organic matter, recycling nutrients.
 - Microorganisms prevent the recycling of materials in an ecosystem.
68. What is the primary process responsible for water returning to the atmosphere during the water cycle?
- Condensation
 - Evaporation
 - Precipitation
 - Runoff
69. Where does photosynthesis occur in the carbon cycle?
- In consuming organisms
 - During respiration
 - In the atmosphere
 - In plants
70. In the carbon cycle, what process involves the release of carbon dioxide?
- Decomposition
 - Fossilization
 - Combustion of fossil fuels
 - Photosynthesis
71. Which process in the carbon cycle involves breaking down organic matter into simpler substances?
- Photosynthesis
 - Respiration
 - Decomposition
 - Fossilization
72. What occurs when organisms take in carbon as part of their food chain in the carbon cycle?
- Combustion of fossil fuels
 - Photosynthesis
 - Consumption by organisms
 - Fossilization
73. How does the carbon cycle involve the formation of fossil fuels?
- During photosynthesis
 - In the atmosphere
 - Through respiration
 - By fossilization
74. In the carbon cycle, which process returns carbon dioxide to the environment at a faster rate than it is absorbed by plants during photosynthesis?
- Combustion of fossil fuels
 - Decomposition
 - Photosynthesis
 - Respiration

85. What does the term biodiversity refer to in the context of ecosystems, specifically the variety of different species of organisms in a location?
- The variety of weather conditions in a location
 - The variety of different species of organisms in a location
 - The variety of rocks and minerals in a location
 - The variety of human-made structures in a location
86. Why is great biodiversity, which ensures ecosystems can adapt to changes, important for the stability of ecosystems?
- It makes ecosystems more vulnerable to disturbances
 - It reduces the overall species population
 - It ensures ecosystems can adapt to changes
 - It has no impact on ecosystem stability
87. What is the relationship between biodiversity and species dependence on one another, given that biodiversity reduces the dependence of one species on another?
- Biodiversity increases species dependence
 - Biodiversity has no effect on species dependence
 - Biodiversity reduces the dependence of one species on another
 - Biodiversity leads to competition among species
88. How does the future of the human species on Earth relate to maintaining biodiversity, especially when maintaining biodiversity is crucial for the future of the human species?
- Human survival is independent of biodiversity
 - Biodiversity has no impact on human survival
 - Maintaining biodiversity is crucial for the future of the human species
 - Human survival relies on the extinction of other species
89. What is the impact of many human activities on biodiversity, given that many human activities are reducing biodiversity?
- Human activities have no effect on biodiversity
 - Human activities always increase biodiversity
 - Many human activities are reducing biodiversity
 - Human activities solely promote biodiversity
90. Is it within human control to address the reduction of biodiversity, as it is under human control to try and stop the reduction of biodiversity?
- No, humans have no control over biodiversity
 - Yes, it is under human control to try and stop the reduction of biodiversity
 - Biodiversity reduction cannot be prevented
 - Biodiversity is solely controlled by natural factors
91. What is the consequence of an increased use of peat resources?
- A decrease in waste production
 - An increased requirement for resources
 - A reduction in biodiversity
 - Improved resource management
92. How does increased waste production relate to pollution?
- It has no impact on pollution
 - Increased waste production leads to pollution
 - Increased waste production reduces pollution
 - Waste production is unrelated to pollution
93. What is the effect of pollution on plants and animals?
- Pollution has no effect on plants and animals
 - Pollution kills plants and animals, reducing biodiversity
 - Pollution increases biodiversity
 - Pollution promotes the growth of plants and animals

94. How do humans affect the availability of land for other animals and plants?
- Humans increase the available land for other species
 - Humans promote the expansion of habitats
 - Humans reduce the amount of land available for other animals and plants
 - Humans have no impact on the land available for other species
95. What happens to peat bogs to produce garden compost?
- Peat bogs are expanded to produce compost
 - Peat bogs are left untouched in compost production
 - Peat bogs are destroyed to produce garden compost
 - Peat bogs are preserved and protected
96. What is the consequence of destroying peat bogs?
- An increase in peat bog habitat
 - A reduction in habitat area
 - No impact on habitats
 - Improved soil fertility
97. How is carbon dioxide released into the atmosphere related to peat?
- Peat has no effect on carbon dioxide
 - Peat can be burned, releasing carbon dioxide into the atmosphere
 - Peat reduces carbon dioxide emissions
 - Carbon dioxide is not linked to peat
98. What is the conflict related to the need for cheap available compost?
- There is a conflict between the need for cheap available compost
 - There is no conflict in compost production
 - The need for cheap compost benefits biodiversity
 - The need for cheap compost promotes environmental conservation
99. Why is there a need to conserve peat bogs and peatlands?
- The habitat has ecological significance for rare and migrating birds, eco-tourism and habitat diversity
 - There is no need for conservation
 - Conservation efforts harm the environment
 - Peat bogs and peatlands have no ecological significance
100. What is the result of an increased use of resources?
- A decrease in waste production
 - A reduction in biodiversity
 - An increased requirement for resources
 - Improved resource management
101. How does increased waste production relate to pollution?
- It has no impact on pollution
 - Increased waste production reduces pollution
 - Increased waste production leads to increased land, air and water pollution
 - Waste production is unrelated to pollution
102. What is the effect of pollution on plants and animals?
- Pollution has no effect on plants and animals
 - Pollution increases biodiversity
 - Pollution kills plants and animals, reducing biodiversity
 - Pollution promotes the growth of plants and animals

103. Why is it essential to reduce pollution for the conservation of biodiversity?
- Pollution has no impact on biodiversity
 - Pollution enhances biodiversity
 - Pollution reduces waste production
 - Pollution helps maintain a balanced ecosystem
104. What is the result of an increased use of single use plastics?
- A decrease in waste production
 - A reduction in biodiversity
 - An increased requirement for waste management sites such as land fill
 - Improved resource management
105. How does increased waste production relate to pollution?
- It has no impact on pollution
 - Increased waste production reduces pollution
 - Increased waste production leads to pollution of soil, water ways causing negative health effects for organisms if consumed
 - Waste production is unrelated to pollution
106. What is the effect of pollution on plants and animals?
- Pollution has no effect on plants and animals
 - Pollution increases biodiversity
 - Pollution kills plants and animals, reducing biodiversity
 - Pollution promotes the growth of plants and animals
107. Why is large-scale deforestation in tropical areas prevalent?
- Large-scale deforestation is not a common practice
 - It leads to increased biodiversity
 - Large-scale deforestation is driven by the need for agricultural land
 - Large-scale deforestation is a conservation effort
108. What is one significant environmental implication of deforestation?
- Improved air quality
 - Enhanced biodiversity
 - Reduced carbon emissions
 - Negative impact on ecosystems
109. Which statement best evaluates the environmental implications of deforestation?
- Deforestation has no significant environmental impact
 - Deforestation has a positive effect on climate change
 - Deforestation can lead to habitat loss and increased carbon emissions
 - Deforestation enhances ecosystem stability
110. How does deforestation primarily affect biodiversity?
- It enhances biodiversity
 - It has no impact on biodiversity
 - It leads to a loss of species and habitats
 - It promotes wildlife conservation
111. What is the result of excessive use of plastic pollution in oceans and waterways?
- Improved marine ecosystems
 - Aquatic life is significantly harmed due to bioaccumulation
 - Harm to marine life and ecosystems
 - Increased fish populations

112. What is the primary source of air pollution in urban areas?
- Natural vegetation
 - Clean energy sources
 - Emission from vehicles and industries
 - Reduction in air quality standards
113. How does the depletion of the ozone layer affect the environment?
- It has no effect on the environment
 - Enhanced protection from UV radiation
 - Increased UV radiation and harm to living organisms
 - Promotion of natural ozone recovery
114. What is the consequence of excessive resource extraction and mining?
- Sustainable resource management
 - No impact on resource availability
 - Habitat destruction and resource depletion
 - Enhanced ecological balance
115. How does the overuse of freshwater resources impact aquatic ecosystems?
- It improves water quality
 - No impact on aquatic life
 - It leads to habitat destruction and threatens aquatic species
 - It promotes sustainable water management
116. What is the primary driver of climate change and global warming?
- Natural climate cycles
 - Enhanced environmental protection
 - Human activities, such as burning fossil fuels
 - Stabilization of global temperatures
121. What are positive human interactions in an ecosystem?
- Habitat destruction and pollution
 - Conservation efforts and sustainable practices
 - Overfishing and deforestation
 - Excessive resource extraction
122. What are negative human interactions in an ecosystem?
- Conservation efforts and sustainable practices
 - Overfishing and deforestation
 - Habitat destruction and pollution
 - Excessive resource extraction
123. How can we evaluate methods used to tackle negative human impacts on the environment?
- By promoting harmful practices
 - By ignoring environmental issues
 - By conducting scientific research and analysis
 - By intensifying negative impacts
124. What are the conflicting pressures on maintaining biodiversity?
- Promoting conservation and sustainable practices
 - Enhancing species diversity
 - Balancing economic development and preserving ecosystems
 - Ignoring environmental concerns

125. How can we describe and explain positive human interactions in an ecosystem?
- By detailing the destruction of habitats
 - By understanding the value of conservation efforts
 - By advocating for overfishing and deforestation
 - By endorsing excessive resource extraction
126. What are some advantages of maintaining biodiversity in an ecosystem, and how do they contribute to its overall health and stability?
- They have no impact on ecosystem health
 - Biodiversity enhances resilience, improves ecosystem services, and supports species interactions
 - Biodiversity leads to habitat destruction and imbalance
 - Biodiversity promotes overexploitation of resources
127. Can you explain the potential disadvantages of not prioritizing biodiversity conservation, and how it might impact ecosystems and human well-being?
- Neglecting biodiversity has no consequences
 - Neglecting biodiversity can lead to the loss of critical species, reduced ecosystem services, and increased vulnerability to environmental changes
 - Neglecting biodiversity enhances ecosystem stability
 - Neglecting biodiversity results in increased species diversity
128. How do conflicting pressures, such as economic development and biodiversity preservation, influence the decisions and actions taken to maintain biodiversity in various environments?
- Conflicting pressures have no impact on decision-making
 - Conflicting pressures encourage a balanced approach to protect both economic interests and biodiversity
 - Conflicting pressures solely prioritize economic development
 - Conflicting pressures lead to the extinction of species

Marksheet – Fill in your answers using this grid:

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Total		/108	

Feedback and Review

Reviewing and providing feedback on your GCSE biology questions is an important part of the learning process. Here's a list of tasks to help you effectively review and learn from the content you didn't know:

Identify Weak Areas: Go through the questions you answered and identify the specific topics or concepts you struggled with.

Revisit the Questions: Re-read the questions you answered incorrectly to understand the context and what was expected in your response.

Consult Textbooks and Notes: Refer to your GCSE biology textbooks, revision guides and class work to find information related to the topics you found challenging.

Online Resources: Use online resources and educational websites, videos, or articles to gain a deeper understanding of the topics you struggled with. Ask if you are unsure which to use.

Create a Summary: Summarize the key points for each topic or concept in your own words. This will help reinforce your understanding.

Practice Problems: Look for additional practice questions or worksheets related to the weak areas you identified and attempt them.

Flashcards: Create flashcards for important terms, definitions, and concepts. Use them for quick and effective review.

Mind Maps: Create visual mind maps or concept maps to connect related ideas and concepts. This can help you see the bigger picture.

Teach Someone Else: Explaining what you've learned to a friend or family member can be an effective way to reinforce your understanding.

Use the summary box below to annotate the ideas and information that you must use to provide your own feedback on what you are going to do next to develop and enhance your learning of this content:

Golden Knowledge Multiple Choice Question sheet: Topic 7: Ecology (TRILOGY COURSE)

Answers

1	c) Levels of interaction
2	a) It leads to competition for resources
3	c) Nutrients and mates
4	c) Through natural selection
5	c) Ecosystem
6	c) To survive and reproduce
7	d) It can disrupt the whole community
8	c) Population sizes of different species
9	c) The survival and successful reproduction of certain plant species
10	d) To secure limited resources such as food and territory
11	d) To maintain a balance and support the well-being of various species
12	b) The mutual dependence of different species on each other for resources
13	b) It causes a decline in the diversity of species in the community.
14	d) They are non-living factors that affect the community.
15	d) It can alter the population dynamics and interactions among species.
16	c) They are living factors that affect the community.
17	c) When the population is too small to ensure successful reproduction.
18	c) Evolving traits that help it survive in its usual surroundings.
19	c) To enable them to thrive in their normal living conditions.
20	c) Organisms can exhibit various types of adaptations, including physical, behavioural, and physiological.
21	c) Extremophiles are organisms that thrive in very harsh and extreme conditions.
22	d) Very extreme and harsh conditions.
29	d) To assess where and how many individuals of a species are found in an area.
30	b) Seasonal or periodic changes in factors like food availability or weather.
31	b) Populations remain at a constant size.
32	c) To estimate the population size and distribution of plants.
33	c) To observe changes in vegetation over a specific line or path.
34	c) To ensure that data collection is unbiased and representative.
35	d) By visually determining the proportion of ground covered by the species.
36	c) The differences in plant populations and communities.
37	d) To gather data for scientific research.
38	d) To obtain a representative estimate of the population.
39	c) It aids in understanding how the species interacts with its environment.
40	c) To ensure that the results are statistically significant.
41	b) It assists in assessing the impact of environmental changes on the species.
42	d) The density of plants in the habitat.
43	d) To gather baseline data for further study.
44	d) To estimate population sizes and distributions efficiently.
45	b) They are nocturnal to avoid the heat.
46	a) They have long, thin legs for running.
47	d) They have long tails for balance.
48	a) Bright and contrasting colours.
49	a) They sleep during the day.
50	b) They have thick, waxy cuticles to reduce water loss.
51	a) They have deep taproots to reach water.
52	c) They grow tall to reach sunlight in the dense canopy.
53	b) Specialized enzymes for digesting insects.

54	b) Rapidly closing their leaves when touched.
55	d) Organisms that photosynthesize
56	d) By photosynthesis carried out by producers
57	d) By a food chain
58	d) With producers
59	b) To provide energy for all other trophic levels
60	c) Predator
61	c) Prey
62	b) Tertiary consumers
63	d) The cycling of materials
64	c) It maintains the balance of atmospheric gases needed for respiration
65	b) It regulates temperature, making the environment more suitable
66	c) All materials are recycled through various living and non-living components.
67	c) Microorganisms break down and decompose organic matter, recycling nutrients.
68	b) Evaporation
69	d) In plants
70	c) Combustion of fossil fuels
71	c) Decomposition
72	c) Consumption by organisms
73	d) By fossilization
74	a) Combustion of fossil fuels
85	b) The variety of different species of organisms in a location
86	c) It ensures ecosystems can adapt to changes
87	c) Biodiversity reduces the dependence of one species on another
88	c) Maintaining biodiversity is crucial for the future of the human species
89	c) Many human activities are reducing biodiversity
90	b) Yes, it is under human control to try and stop the reduction of biodiversity
91	b) An increased requirement for resources
92	b) Increased waste production leads to pollution
93	b) Pollution kills plants and animals, reducing biodiversity
94	c) Humans reduce the amount of land available for other animals and plants
95	c) Peat bogs are destroyed to produce garden compost
96	b) A reduction in habitat area
97	b) Peat can be burned, releasing carbon dioxide into the atmosphere
98	a) There is a conflict between peat habitat destruction and the need for cheap available compost
99	a) The habitat has ecological significance for rare and migrating birds, eco-tourism and habitat diversity
100	c) An increased requirement for resources
101	c) Increased waste production leads to increased land, air and water pollution
102	c) Pollution kills plants and animals, reducing biodiversity
103	d) Pollution helps maintain a balanced ecosystem
104	c) An increased requirement for resources
105	c) Increased waste production leads to pollution of soil, water ways causing negative health effects for organisms if consumed
106	c) Pollution kills plants and animals reducing the available diversity, which in turn causes further reductions in diversity
107	c) Large-scale deforestation is driven by the need for agricultural land
108	d) Negative impact on ecosystems
109	c) Deforestation can lead to habitat loss and increased carbon emissions

110	a) It enhances biodiversity
111	b) Aquatic life is significantly harmed due to bioaccumulation
112	c) Emission from vehicles and industries
113	c) Increased UV radiation and harm to living organisms
114	c) Habitat destruction and resource depletion
115	c) It leads to habitat destruction and threatens aquatic species
116	c) Human activities, such as burning fossil fuels
121	b) Conservation efforts and sustainable practices
122	c) Habitat destruction and pollution
123	c) By conducting scientific research and analysis
124	c) Balancing economic development and preserving ecosystems
125	b) By understanding the value of conservation efforts
126	b) Biodiversity enhances resilience, improves ecosystem services, and supports species interactions
127	b) Neglecting biodiversity can lead to the loss of critical species, reduced ecosystem services, and increased vulnerability to environmental changes
128	b) Conflicting pressures encourage a balanced approach to protect both economic interests and biodiversity