**Interactions between organisms**

|  |  |
| --- | --- |
| Instructions to students  • You have 50 minutes to complete the test.  • Please answer all questions in the spaces provided.  • There is to be no talking during the test. | Marks  Section I: Multiple-choice questions: 5 marks  Section II: Short-answer questions: 11 marks  Section III: Extended-response questions: 9 marks  Total: 25 marks |

|  |  |
| --- | --- |
| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Score: /25  Grade: % |
| Comments: | |

Section I: Multiple-choice questions

For each question, circle or highlight the correct answer.

|  |  |  |
| --- | --- | --- |
| 1 Which of the following best describes the term ‘ecosystem’? | |  |
| A | A community and its environment. |
| B | The producers and consumers together. |
| C | A food web. |
| D | The flow of matter and energy through a community. |
| 2 Which one of the following groups of organisms contains only producers? | | |
| A | Cats, green frogs, mice | |
| B | Gum trees, worms, beetles | |
| C | Cacti, grass, pond weed | |
| D | Mushrooms, bacteria, wheat | |
| 3 In a food chain, organisms that feed on a producer are called: | | |
| A | omnivores. | |
| B | predators. | |
| C | primary consumers. | |
| D | predators. | |

|  |  |
| --- | --- |
| 4 Which of the following is NOT true of firestick farming? | |
|  | |
| A | It creates space and allows plenty of sunlight to reach the forest floor for new shoots to grow. |
| B | It prevents the build-up of dense eucalypts and scrub. |
| C | It encourages herbivores to live in these areas. |
| D | It should be carried out in both woodland and rainforest areas. |
| 5 An organism that recycles nutrients by breaking down dead organic matter is called a: | |
| A | producer. |
| B | decomposer. |
| C | secondary consumer. |
| D | primary consumer. |

|  |  |
| --- | --- |
|  | Section I  Total marks:  /5 marks |

Section II: Short-answer questions

|  |
| --- |
| The information below is to be used to answer questions 6–9.  In the pond are various water plants, algae and reeds. Around the pond are grasses and small shrubs. |

|  |
| --- |
| Organisms feeding in and around the pond ecosystem |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Organism | Feeding requirements | | | |
| Pelican | Small and large fish, frogs and yabbies | | | |
| Brown trout (a fish) | Insect larvae and insects | | | |
| Kingfisher | Small fish, yabbies and tadpoles | | | |
| Tadpoles and small fish | Algae and water plants | | | |
| Water insects | Water plants | | | |
| Feral cat | Frogs, ducks, yabbies and kingfishers | | | |
| Frogs | Insects, worms and grubs | | | |
| Ducks | Water plants, small yabbies and worms | | | |
| Platypus | Insects, worms, small crabs and yabbies | | | |
| Yabbies and small crabs | Algae, water plants, small insects and beetles | | | |
| Mosquito larvae | Algae | | | |
| Water snake | Small fish, frogs and ducklings | | | |
| 6 Identify one herbivore and one omnivore in the pond. | | | | |
|  | | | | |
|  | | | | |
|  | | | /2 marks | |
| 7 If humans caught all the fish in this pond, what do you think would happen to the amount of algae? | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | /2 marks | |
| 8 Why is the presence of a feral cat in this ecosystem a cause for concern? | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | /3 marks | |
| 9 Using the information in the table on page 3 on organisms feeding in and around a pond ecosystem, construct a food chain involving five organisms. Separate each organism with arrow symbols. | | | | |
|  | | | /4 marks | |
|  | | | Section II  Total marks:  /11 marks | |

Section III: Extended-response questions

|  |  |
| --- | --- |
| 10 Select a human activity such as deforestation, land degradation, and urban sprawl and explain how it can impact the biodiversity of an ecosystem. | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | /5 marks |

|  |  |
| --- | --- |
| 11 Decomposers are not shown in food webs; however, they play an important role in all ecosystems. Discuss the importance of having decomposers in an ecosystem and the consequence to the environment if they were not present. | |
| Strawberries decomposing | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | |
|  | Section III  Total marks:  /9 marks |