

4.1 Species, Communities, Ecosystems & Energy Flow

Question Paper

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| Course | DPIB Biology |
| Section | 4. Ecology |
| Topic | 4.1 Species, Communities, Ecosystems & Energy Flow |
| Difficulty | Easy |

Time allowed: 10
Score: /5
Percentage: /100

Question 1

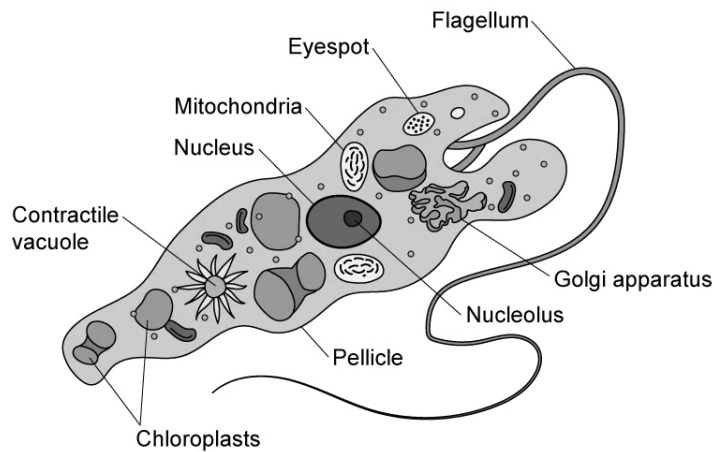
Which is the correct definition for a species?

- A. A group of organisms which look similar.
- B. A group of organisms with similar characteristics.
- C. A group of organisms which can interbreed to produce fertile offspring.
- D. A group of living things.

[1 mark]

Question 2

Euglena is an autotroph.



Identify, from the diagram, the feature which indicates this is an autotrophic organism.

- A. Nucleolus
- B. Chloroplast
- C. Contractile vacuole
- D. Mitochondria

[1 mark]

Question 3

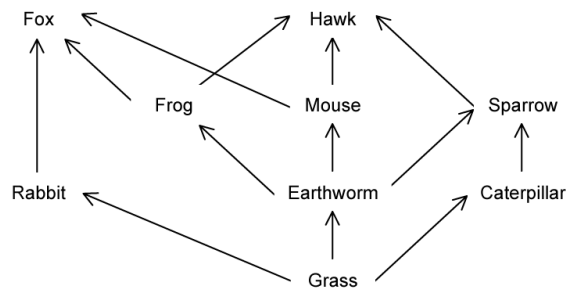
Which option correctly lists some abiotic features of an ecosystem?

- A. Mineral ions, light intensity, temperature
- B. Competition, predation
- C. pH, producers, mineral ions
- D. Wind speed, decomposition, mineral ions

[1 mark]

Question 4

Identify the main energy transfers carried out by the organisms in the food web below:

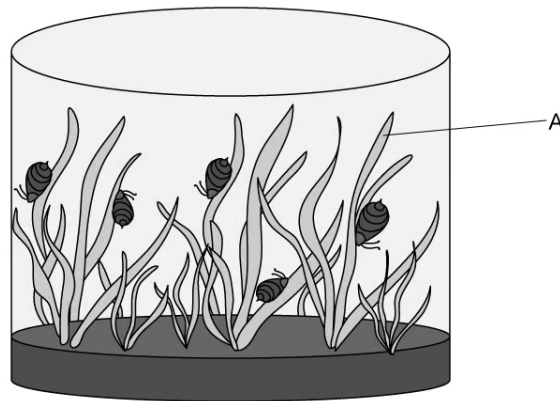


| | Grass | Rabbit |
|----------|------------------|--------------------|
| A | light → chemical | chemical → light |
| B | chemical → light | kinetic → heat |
| C | light → heat | chemical → thermal |
| D | light → chemical | chemical → kinetic |

[1 mark]

Question 5

A simple aquatic mesocosm is shown below



Why is **A** an important component of the mesocosm?

- A. **A** provides protection for the primary consumers from predators.
- B. **A** converts heat energy to chemical energy.
- C. **A** provides carbohydrates and oxygen to support the mesocosm.
- D. **A** helps to maintain a stable temperature.

[1 mark]