



Give the marks for the points in the marking scheme; an answer in other words that says the same is right.

1 Key words

1. environment
2. carbon dioxide
3. Sun
4. reuse
5. producers
6. consumers
7. decomposers
8. secondary

K • 4

Each carries 0.5 mark.

2 Label the diagram

1. sunlight
2. Producers green plants
3. Primary consumers

4. Secondary consumers
5. Decomposers bacteria and fungi
6. Tertiary consumers

K • 3

Each carries 0.5 mark.

3 Match the following

1. algae → c. producer
2. cow → d. primary consumer
3. frog → a. secondary consumer
4. tiger → e. tertiary consumer

U • 2

Each carries 0.5 mark.

4 Multiple choice

- i. c. melting old aluminium pots to make new ones

U • 1

Recycling turns the old thing into raw material for a new thing: the old pots are melted and made again. The other three use the thing again as it is: that is reuse.

- ii. a. banana peel

K • 1

A banana peel rots in a few weeks: bacteria and fungi break it down. Plastic, glass and tin don't rot.

- iii. b. mustard plant

K • 1

A mustard plant is green: it makes its own food. A goat and a frog are consumers. A mushroom has no chlorophyll: it is a decomposer.

- iv. c. a secondary consumer

A • 1

Grass is the producer and the grasshopper, which eats it, the primary consumer. The frog eats the primary consumer, so it is a secondary consumer.

- v. c. a pond

K • 1

A pond is in water, so it is aquatic. Grasslands, deserts and forests are on land: terrestrial ecosystems.

5 Very short answers

- a. MARKING SCHEME

K • 1

✓ Bacteria and fungi.



- b. MARKING SCHEME K · 1
✓ The living and non-living things of a place working together as one system.
- c. MARKING SCHEME K · 1
✓ Any one of plastic, glass, tins, metal.

6 Short answers

- a. MARKING SCHEME U · 2
✓ Any one difference, e.g. used again as it is; made into a new thing.
✓ Any second difference, e.g. at home; in a factory, or an example of each.
- b. MARKING SCHEME K · 2
✓ The non-living parts of an ecosystem.
✓ Any two examples, e.g. air, water, soil, heat, light.
- c. MARKING SCHEME U · 2
✓ Bacteria are decomposers: they break down the dead bodies and wastes of plants and animals.
✓ They return minerals to the soil, which plants use to make food again (so dead matter doesn't pile up).
- d. MARKING SCHEME U · 2
✓ Any one correct action, e.g. sort garbage and put it in a bin.
✓ Any second correct action, e.g. don't burn plastic, carry a cloth bag, plant trees.

7 Long answer

ANSWER

U · 4

All living things respire: they take in oxygen and give out carbon dioxide (burning fuel does the same). Green plants, in sunlight, make their food by photosynthesis: they take in carbon dioxide and give out oxygen. Respiration uses up oxygen and adds carbon dioxide, while photosynthesis uses up carbon dioxide and adds oxygen, so together they keep the two gases balanced in the air.

MARKING SCHEME

- ✓ Living things respire: they take in oxygen and give out carbon dioxide.
- ✓ Green plants make food by photosynthesis in sunlight.
- ✓ In photosynthesis they take in carbon dioxide and give out oxygen.
- ✓ So respiration and photosynthesis together keep the oxygen and carbon dioxide in the air balanced.

8 Think

ANSWER

HA · 2

The balance of the forest will be upset:

- The tigers and leopards that ate the deer will have too little food. Some will starve; others will leave the forest, or come to villages and kill goats and cattle.
- With no deer eating them, the grass and young plants will grow more for a while.
- Other animals that share food with the deer, or that ate the remains of deer killed by tigers (jackals, vultures), will also be affected.

One missing animal changes the whole ecosystem.

MARKING SCHEME

- ✓ The tigers and leopards that ate the deer will lack food: some starve, or come to villages and kill goats and cattle.
- ✓ The grass and young plants will grow more for a while, so the balance of the whole ecosystem is upset.



9 Activity: What does your family throw away?

(not marked)

WHAT STUDENTS SHOULD FIND

In most homes the “rots” column is longer: vegetable peels, leftover rice, tea leaves, eggshells, leaves. These can become compost. The other column usually has plastic wrappers, bags and bottles, tins and broken glass; jars, tins and bottles can be reused, and plastic, metal and paper sent to be recycled.

Marks by level	Knowledge	Understanding	Application	Higher ability	Total
Marks	15	13	1	2	31

