



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. photosynthesis
2. chlorophyll
3. stomata
4. digestive system
5. energy
6. saprophytes
7. parasites
8. starch

K • 4

Each carries 0.5 mark.

2 Label the diagram

- | | | |
|---|--|-------|
| 1. liver makes bile, for fat | 5. pancreas (behind the stomach) juice | K • 3 |
| 2. gall bladder stores bile | for starch, protein, fat | |
| 3. large intestine takes water back | 6. small intestine finishes digestion, | |
| 4. food pipe (esophagus) squeezes food down | takes food into the blood | |

Each carries 0.5 mark.

3 Multiple choice

- | | | |
|---|-------------------------------|-------|
| i. | b. oxygen | K • 1 |
| Photosynthesis makes glucose and oxygen, and the plant gives the oxygen out into the air. Carbon dioxide is taken in. | | |
| ii. | b. enzyme | K • 1 |
| Digestive juices contain enzymes, such as amylase, pepsin, trypsin and lipase, which break food down. | | |
| iii. | c. to remove its chlorophyll | U • 1 |
| The alcohol removes the chlorophyll, so the green color doesn't hide the blue-black of the iodine. Boiling in water is what kills and softens the leaf. | | |
| iv. | a. The leaf has starch in it. | U • 1 |
| Iodine turns blue-black only with starch. Starch in the leaf shows that it had made food by photosynthesis. | | |
| v. | b. from the mouth to the anus | K • 1 |
| The alimentary canal is one long tube, from the mouth to the anus. The stomach and intestines are parts of it. | | |

4 Very short answers

- | | | |
|---|----------------|-------|
| a. | MARKING SCHEME | K • 1 |
| ✓ The jobs a living body keeps doing to stay alive (e.g. nutrition, respiration). | | |
| b. | MARKING SCHEME | K • 1 |
| ✓ One correct ectoparasite and one correct endoparasite. | | |
| c. | MARKING SCHEME | K • 1 |
| ✓ Bile. | | |



5 Short answers

a. MARKING SCHEME

K · 2

- ✓ Carbon dioxide + water on the left, with sunlight and chlorophyll.
- ✓ Glucose + oxygen on the right.

b. MARKING SCHEME

U · 2

- ✓ Any one difference, e.g. make their own food; depend on others.
- ✓ Any second difference, e.g. have chlorophyll; have none, or an example of each.

c. MARKING SCHEME

U · 2

- ✓ No.
- ✓ Photosynthesis needs light, which chlorophyll catches to make food; at night there is no sunlight (the plant only respire).

d. MARKING SCHEME

K · 2

- ✓ Ingestion, digestion, absorption, in order.
- ✓ Assimilation, egestion, in order.

6 Long answer

ANSWER

U · 4

1. Pick a green leaf from a plant that has been in sunlight.
2. Boil it in water for about five minutes, to kill it and make it soft.
3. Turn off the flame. Put the leaf in warm alcohol (90 % ethanol) in a test tube standing in the hot water, to remove its chlorophyll. The leaf turns pale.
4. Wash the leaf in warm water to soften it.
5. Spread it on a white tile and put a few drops of iodine solution on it.
6. The leaf turns **blue-black**, which shows that it has **starch**.

MARKING SCHEME

- ✓ Boil the leaf in water for about five minutes (to kill and soften it).
- ✓ With the flame off, warm it in alcohol in a test tube in the hot water, to remove its chlorophyll.
- ✓ Wash it in warm water and put a few drops of iodine solution on it.
- ✓ It turns blue-black, which shows starch.

7 Think

ANSWER

HA · 2

A mushroom has no chlorophyll, so it can't make food from sunlight. It is a saprophyte: its threads soak up food from dead matter, and the straw is dead plant matter for it to feed on.

MARKING SCHEME

- ✓ A mushroom has no chlorophyll, so it can't make its own food (sunlight is no use to it).
- ✓ It is a saprophyte, getting its food from dead matter such as the straw.



8 Activity: What do nutrients do? (Activity 5.5)

(not marked)

WHAT STUDENTS SHOULD FIND

Carbohydrate (rice, roti, potato): gives energy. Fat (ghee, oil, nuts): gives energy and heat. Protein (dal, milk, eggs, meat): builds the body and repairs cells. Minerals (calcium in milk, iron in green leafy vegetables, iodine in salt): bones, teeth and blood. Vitamins (fruits, vegetables): protect the body from diseases.

Marks by level	Knowledge	Understanding	Application	Higher ability	Total
Marks	17	10	0	2	29

