

Characteristics and Classification of Living Organisms

Question Paper 2

Level	IGCSE
Subject	Biology
Exam Board	CIE
Topic	Characteristics and Classification of Living Organisms
Sub-Topic	
Paper Type	Alternative to Practical
Booklet	Question Paper 2

Time Allowed: 56 minutes

Score: /46

Percentage: /100

1 Fig. 2.1 shows a fresh seed of broad bean, *Vicia faba*, which has been cut in half.

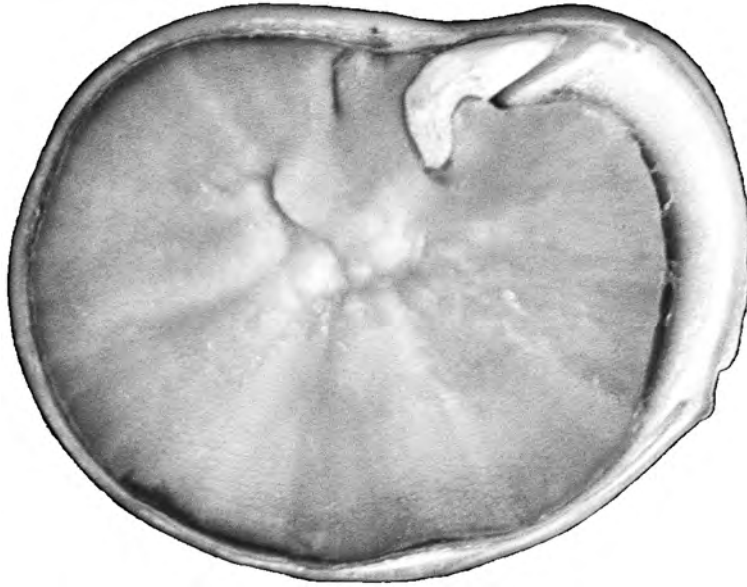


Fig. 2.1

(a) (i) Make a large, labelled drawing of the cut surface of the seed.

(ii) Measure the length of the seed in Fig. 2.1 and in your drawing.

Indicate on Fig. 2.1 where the measurement was taken.

length of seed in Fig. 2.1

length of seed in your drawing

Calculate the magnification of your drawing.

Show your working.

magnification [3]

(b) The broad bean is an example of a legume. Legumes are a good source of protein.

Describe how you would compare the protein content of two different beans.

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.....
.....
.....
.....
..... [4]

total [13]

- 2 Fig. 2.1 shows two halves of a fresh strawberry fruit. This is a false fruit as the edible part has developed from a swollen receptacle and the seeds are found in structures called achenes on the surface of the strawberry.



Fig. 2.1

- (a) (i) Make a large, labelled drawing of this fruit to show the cut surface. Make a second large, labelled drawing to show the outer surface. The second drawing should show the arrangement of the seeds.

cut surface

out surface

(ii) Suggest how the fruit may be dispersed to spread the seeds to new areas.

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.....
..... [2]

(b) (i) Describe how you would safely test this fruit to show the presence of reducing sugar.

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..... [4]

(ii) Describe how you would test this fruit to show the presence of protein.

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..... [2]

(c) Fig. 2.2 shows two different strawberry fruits, **S** and **T**, from species of strawberry plants that grow in different habitats.

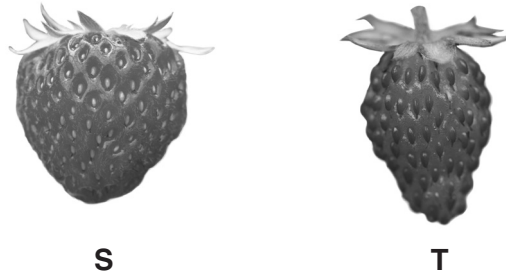


Fig. 2.2

(i) Describe **two similarities**, visible in Fig. 2.2, between the two fruits.

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..... [2]

(ii) Complete Table 2.1 to describe **two differences**, visible in Fig. 2.2, between the two fruits.

Table 2.1

feature	S	T
seeds		
shape		

[2]

[Total: 17]

3 Fig. 2.1 is a photograph of a dandelion fruit.



Fig. 2.1

(a) Make a large drawing of the fruit in the space below.

Add labels to show:

- where the fruit was attached to the plant,
- the position of the seed.

- (b) (i) Measure the length of the fruit in Fig. 2.1 and draw a straight line next to your drawing to show this length.

length of fruit in Fig. 2.1

length of fruit in your drawing [2]

- (ii) Calculate the magnification of your drawing.

Show your working.

magnification [2]

(c) Fig. 2.2 shows a fruit which has been kept in a **dry** environment for one day.

Fig. 2.3 shows a fruit which has been kept in a **damp** environment for one day.



Fig. 2.2



Fig. 2.3

(i) Complete the table below to show one visible difference between the two dandelion fruits.

feature	dry fruit shown in Fig. 2.2	damp fruit shown in Fig. 2.3
.....

[2]

