

-6/ CSEC Integrated Science
Question 2
Exemplar 1

2. Figure 2 shows a terrestrial food chain.

Grass → rabbit → hawk

Figure 2. A terrestrial food chain

- (a) (i) State TWO similarities in structure between a typical cell in the grass and a typical cell in the rabbit.

1) They both contain a nucleus
2) and a Cell wall membrane
(2 marks)

- (ii) State TWO differences in structure between a typical cell in the grass and a typical cell in the rabbit.

~~The cell in the grass has a large vacuole and~~
Only the grass cell contains
1) Cytoplasm Chloroplast and
2) Cell wall
(2 marks)

- (b) (i) Identify a producer in Figure 2.

Grass
(1 mark)

- (ii) Give a reason for your answer in (b) (i).

The producers manufacture ^{their} own food.
(1 mark)

- (iii) What is a likely effect on the food chain if a drought kills all the grass in that area?

The amount of rabbit will
drastically decrease in the area.
(1 mark)

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(c) Figure 3 shows a vertical section of a tooth.

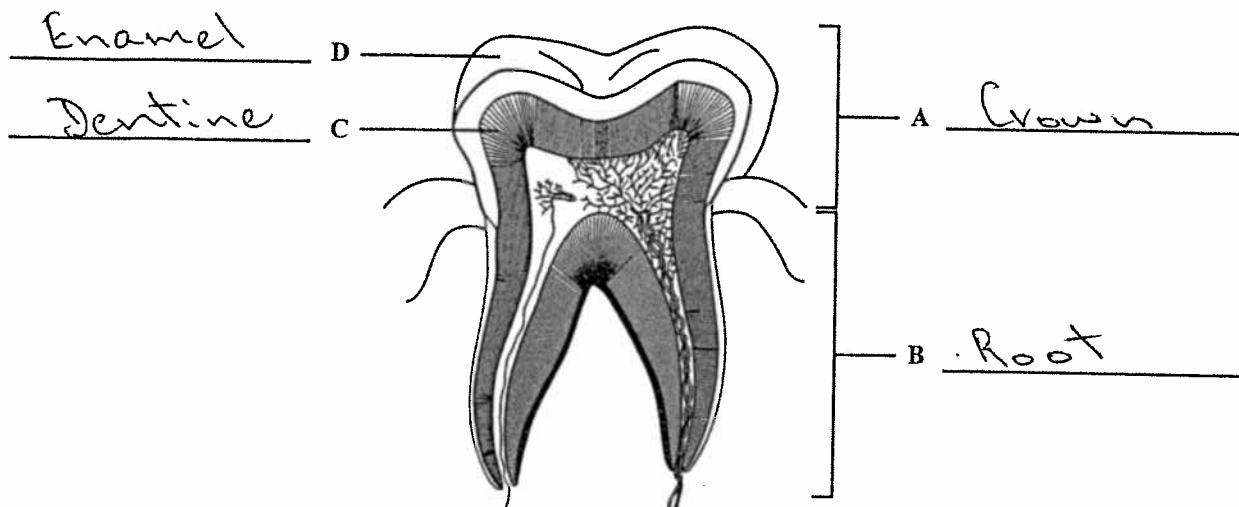


Figure 3. Vertical section of a tooth

- (i) Identify the parts labelled A, B, C and D. Write your answer in Figure 3. (4 marks)
- (ii) Name the type of tooth shown in Figure 3. (1 mark)
- Molar
- (iii) Name ONE other type of tooth. (1 mark)
- Canine
- (iv) Suggest TWO features of a rabbit's teeth that make them suitable for its diet. (2 marks)
- 1) The rabbits teeth are Flat
- 2) and ridged.

Total 15 marks

2. Figure 2 shows a terrestrial food chain.

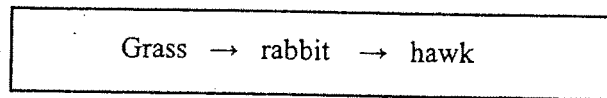


Figure 2. A terrestrial food chain

- (a) (i) State TWO similarities in structure between a typical cell in the grass and a typical cell in the rabbit.

Nucleus
Cell membrane
(2 marks)

- (ii) State TWO differences in structure between a typical cell in the grass and a typical cell in the rabbit.

Cell wall → grass
Small vacuole → rabbit
(2 marks)

- (b) (i) Identify a producer in Figure 2.

Grass
(1 mark)

- (ii) Give a reason for your answer in (b) (i).

Because it is a green plant & they produce their own food
(1 mark)

- (iii) What is a likely effect on the food chain if a drought kills all the grass in that area?

The rabbit would have to find another source of food OR die
(1 mark)

- (c) Figure 3 shows a vertical section of a tooth.

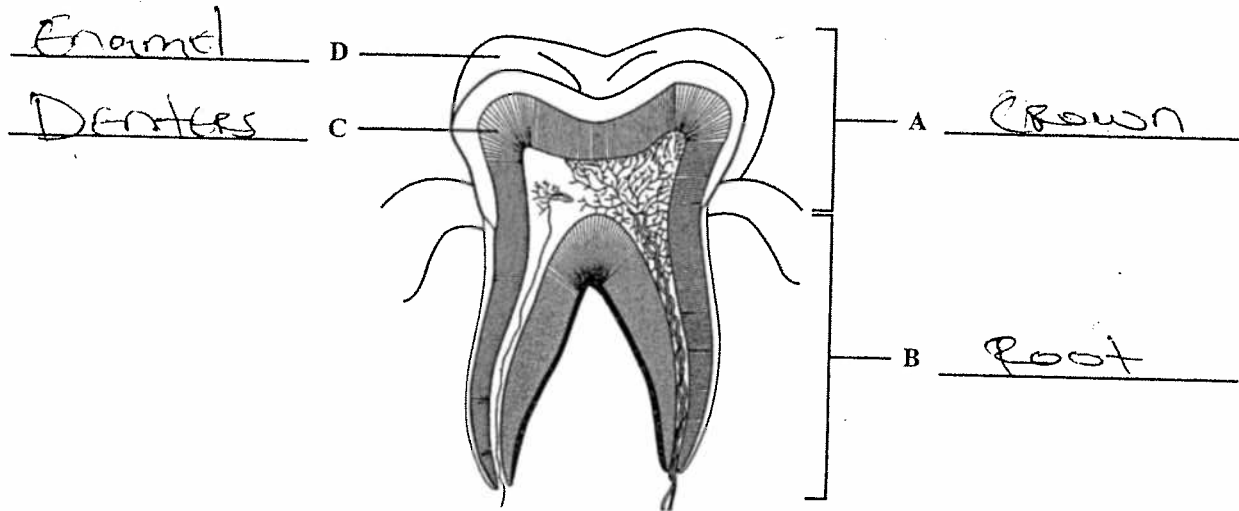


Figure 3. Vertical section of a tooth

- (i) Identify the parts labelled A, B, C and D. Write your answer in Figure 3. (4 marks)
- (ii) Name the type of tooth shown in Figure 3.
Molar/Pre-molar (1 mark)
- (iii) Name ONE other type of tooth.
Incisor (1 mark)
- (iv) Suggest TWO features of a rabbit's teeth that make them suitable for its diet.
They are flat and have rigid edges
suitable for biting through hard
vegetables eg. carrots (2 marks)

Total 15 marks

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Comments

Question 2: Exemplar 1 and 2

- Part (a) These candidates were awarded full marks for this part because the candidates stated correctly the similarities and differences as required in (i) and (ii).
- Part (b) These candidates were awarded full marks for this part of the question because the candidates showed that they clearly understood the concept of food chains as required in the syllabus.
- Part (c) These candidates were awarded full marks for this part of the question; the candidates were able to identify correctly the parts of a tooth; the candidates also were knowledgeable about the types of teeth and were able to relate the structure of teeth to their suitability for a particular diet.

Correct spelling of scientific words, for example, incisor and dentine proved to be challenging for one candidate.