



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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BIOLOGY

6884/01

Paper 1 Short Answers

October/November 2022

1 hour

Candidates answer on the Question Paper.

No additional materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.

Write your answers in dark blue or black pen.

You may use an HB pencil for any diagrams, graphs or rough working.

Do **not** use staples, paper clips, glue or correction fluid.

Do **not** write on the barcode.

Answer **all** questions.

You may use an electronic calculator.

You may lose marks if you do not show your working or use appropriate units.

The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use

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This document consists of 7 printed pages and 1 blank page.

1 Fig. 1.1 shows a bacterial cell.

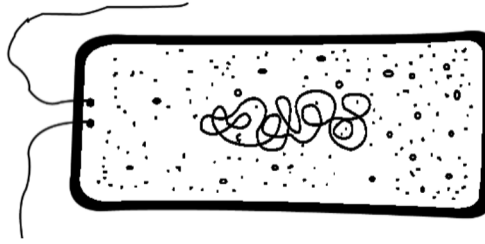


Fig. 1.1

(a) State a visible characteristic that identifies the bacterial cell as a prokaryote.

..... [1]

(b) Use a label line and a letter **A** to indicate the structure that is also found in plant cells but not in animal cells. [1]

2 Fig. 2.1 shows the internal structure of a leaf.

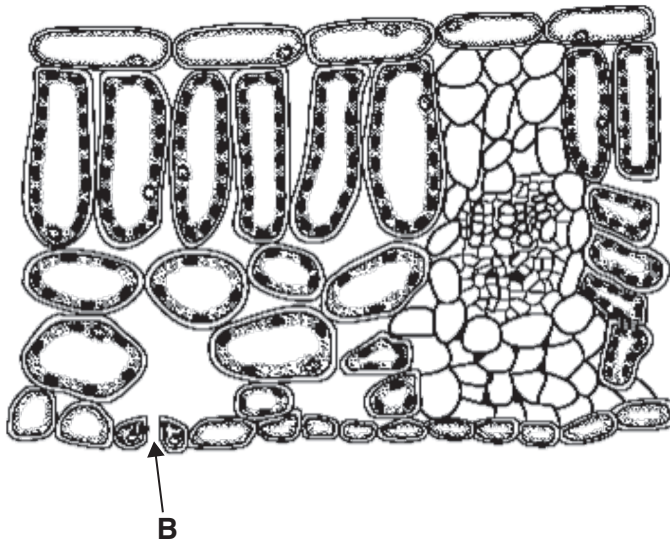


Fig. 2.1

(a) State, with a reason, the level of organisation shown by the leaf in Fig. 2.1.

level

reason

..... [2]

(b) The arrow indicates movement of gases in the leaf during the night.

Name the gas that enters the leaf at night, and is required for respiration.

..... [1]

3 Describe the importance of salts in the treatment of diarrhoea.

.....
 [1]

4 Fig. 4.1 is a diagram of a wind pollinated flower.

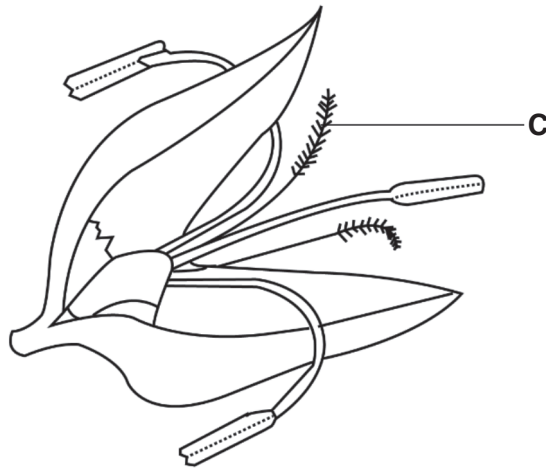


Fig. 4.1

(a) Name the structure labelled C in Fig. 4.1.

..... [1]

(b) The flower in Fig. 4.1 is more likely to be cross-pollinated.

Explain the advantages of cross-pollination in plants.

.....

 [2]

5 A biological washing powder is dissolved in water at a temperature of 98°C to remove fat stains in a cloth. The fat stains could not be removed.

Explain, in terms of the lock and key hypothesis, why the fat stains could not be removed.

.....

 [2]

6 Fig. 6.1 shows a section through human skin.

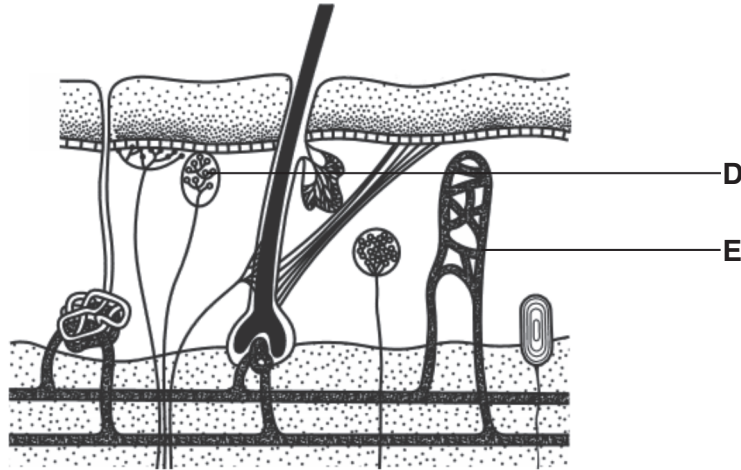


Fig. 6.1

(a) State the role played by part **D** in temperature regulation.

.....
 [1]

(b) Describe the change that will occur in **E** when the body temperature is too low.

.....

 [2]

7 The allele for brown colour in dogs, **B**, is dominant over the allele for white colour, **b**.

The F1 generation of a cross consists of 50% white dogs and 50% brown dogs.

Complete the genetic diagram to show the inheritance of colour in the F1 generation.

Parents phenotype	brown		white
Parents genotype	.....		.....
Gametes	.....		.....
F1 genotype	.....	.....	..... [3]

8 Fig. 8.1 shows part of a DNA molecule. The base guanine (G) is paired to a base labelled H.

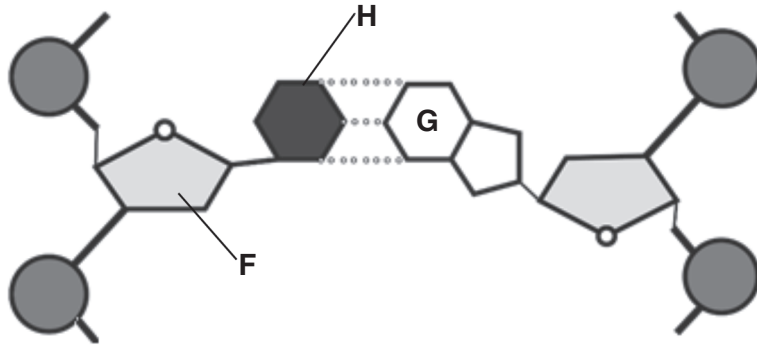


Fig. 8.1

(a) State **one** visible structure that identifies the molecule in Fig. 8.1 as DNA.

..... [1]

(b) Name the part labelled F.

..... [1]

(c) Name the nitrogenous base labelled H.

..... [1]

9 State **one** advantage of using a condom during sexual intercourse.

.....
..... [1]

10 Complete the table by naming the hormone involved in the menstrual cycle, site of production and the target organ.

hormone	where produced	target organ
progesterone	.....	uterus
.....	pituitary gland	ovary
oestrogen	ovary	.....

[3]

11 Fig. 11.1 shows the flow of energy in a typical ecosystem.

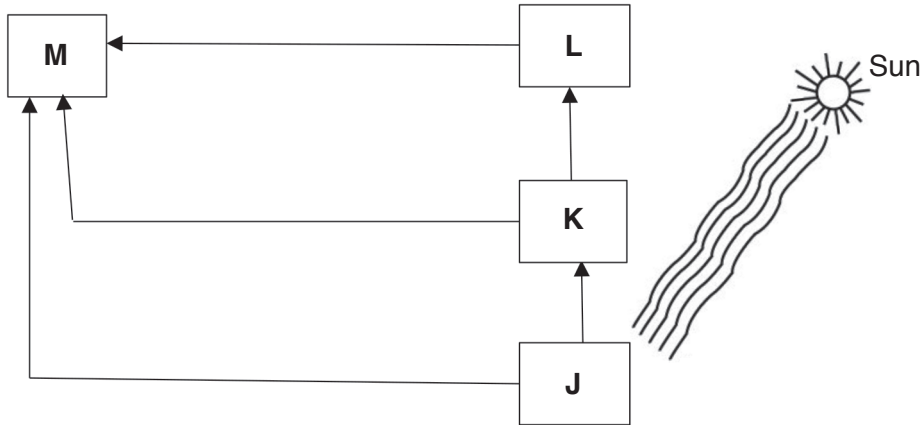


Fig. 11.1

(a) Name the box that represents the largest total mass of living organisms.

..... [1]

(b) Name the group of organisms represented by box M.

..... [1]

(c) Name the box that represents secondary consumers.

..... [1]

12 State the symbol equation for photosynthesis.

..... [2]

13 Name **one** condition in humans caused by gene mutation.

..... [1]

14 After absorption, glucose and amino acids are transported to the liver.

(a) Name the blood vessel that transports glucose and amino acids from the villi to the liver.

..... [1]

(b) The liver secretes bile.

Describe the function of bile in digestion.

.....

 [2]

15 Fig. 15.1 shows a human kidney nephron.

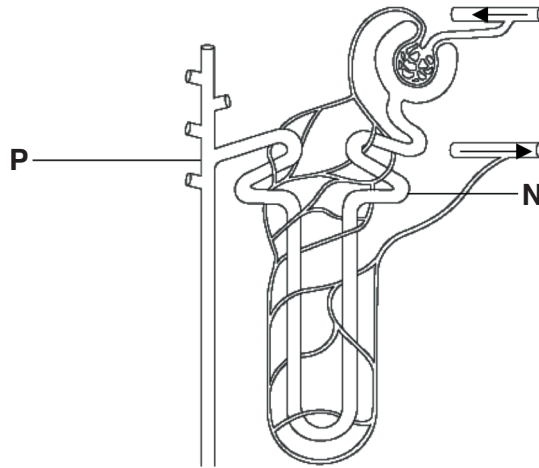


Fig. 15.1

State **two** differences in composition between the contents of parts **N** and **P** for a healthy person.

1

2 [2]

16 Explain how the diaphragm causes exhalation.

.....

..... [2]

17 State **two** natural processes that remove the nitrogen from the atmosphere.

1

2 [2]

18 State the role of the the dense network of blood capillaries in the alveoli in gaseous exchange.

.....

..... [1]

