EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

BIOLOGY **6884/01**

Paper 1 Short Answers **October/November 2021**

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 if you do not use appropriate units.
The number of marks is given in brackets [ ] at the end of each question or part question.

For Examiner's Use

This document consists of **9** printed pages and **3** blank pages.

1 Fig. 1.1 shows a plant cell.

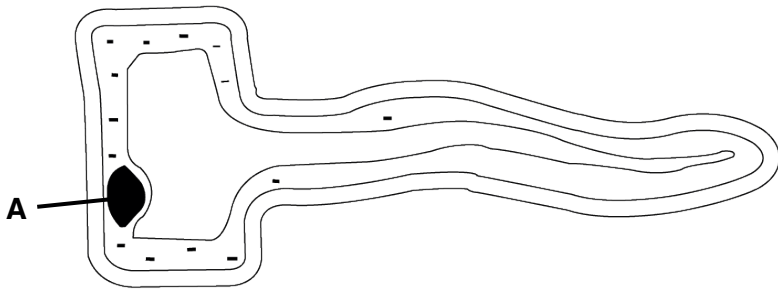

Fig. 1.1

(a) State the function of the feature labelled **A**.

..... [1]

(b) This cell has a hair-like extension.

Explain how this helps the cell to fulfil its function.

.....

.....

..... [2]

2 Fig. 2.1 shows models of two different food molecules before and after digestion.

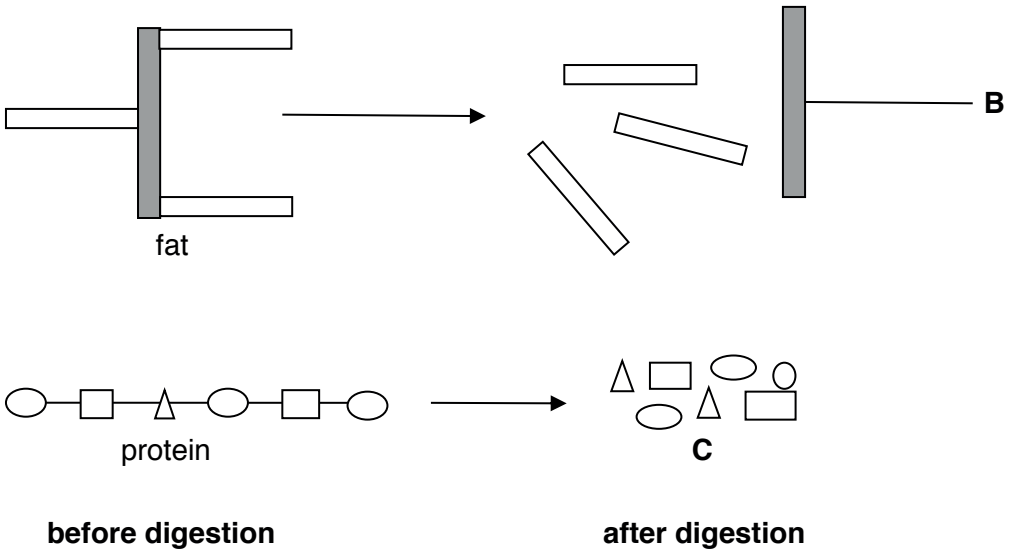

Fig. 2.1

Name the molecules labelled **B** and **C**.

B .....

C ..... [2]

3 The molar teeth in humans play an important role in mechanical digestion.

Explain the process of mechanical digestion.

.....

..... [2]

4 Fig. 4.1 is a diagram of the double circulatory system in humans.

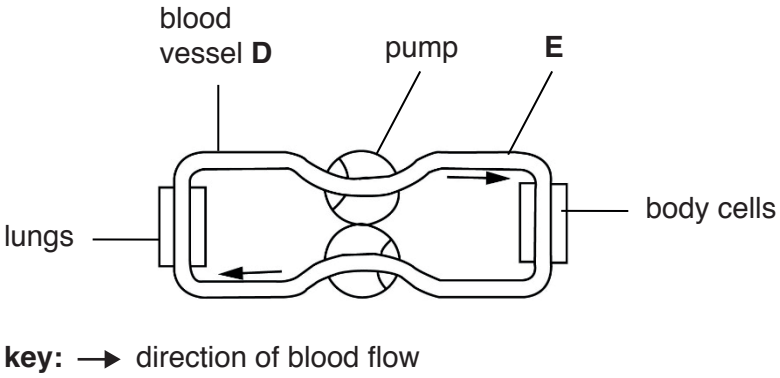

Fig. 4.1

(a) Name the blood vessel labelled **D**.

..... [1]

(b) Explain why blood at **E** flows at a high pressure.

.....

.....

..... [2]

5 Describe, with reference to plant growth hormones, the effect of one-sided lighting on the growth of a plant shoot.

.....

.....

.....

..... [2]

[Turn over

6 Fig. 6.1 shows part of a flowering monocotyledonous plant.

Fig. 6.1

(a) Label, using a straight line and letter **F**, where pollen could have landed to produce the fruit.

..... [1]

(b) Name the agent of pollination in this flower.

..... [1]

7 Fig. 7.1 shows a pathway followed by an impulse in a reflex action.

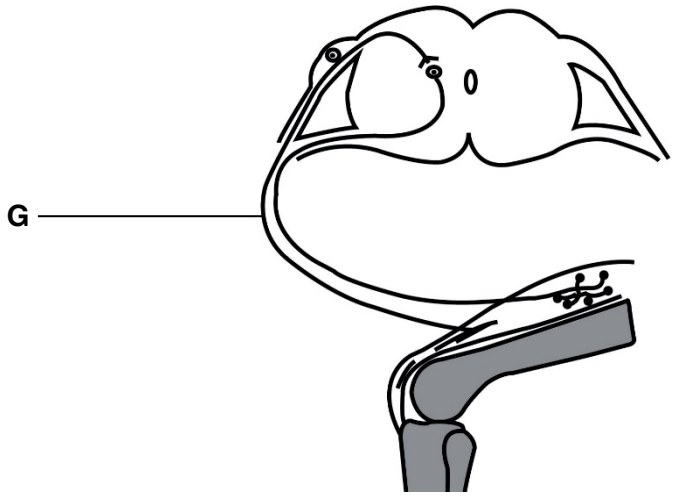

Fig. 7.1

(a) State the name given to the junction between the two neurones.

..... [1]

(b) Describe the effect on this reflex action of cutting the neurone at point **G** in Fig. 7.1.

.....

..... [1]

(c) State **one** reason why a reflex action is an example of an involuntary action.

.....

..... [1]

8 Name the part of the brain that controls the sense of balance.

..... [1]

[Turn over

9 Fig. 9.1 shows a fermenter used in the manufacture of enzymes for biological washing powders.

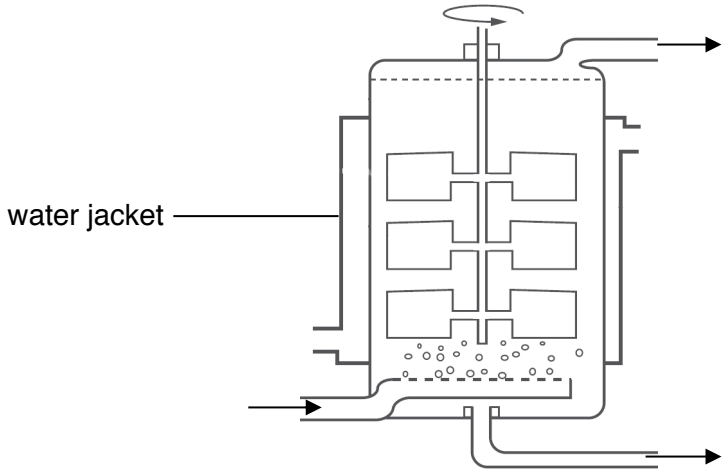

Fig. 9.1

(a) Name **one** microorganism that is used in a fermenter.

..... [1]

(b) State the purpose of the water jacket.

..... [1]

(c) State the type of enzyme in the biological washing powder that removes blood stains.

..... [1]

10 Fig. 10.1 shows an alveolus and associated blood capillary.

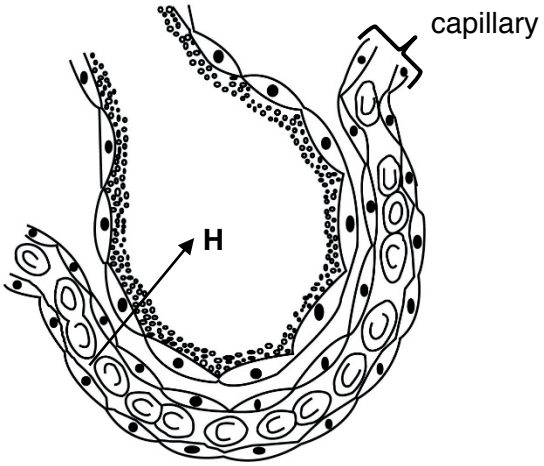

Fig. 10.1

(a) Name the gas that moves in the direction shown by arrow **H**.

..... [1]

(b) Describe how oxygen is transported to body cells.

.....

.....

..... [2]

11 **(a)** Define the term *genetic engineering*.

.....

.....

..... [1]

(b) State **two** reasons why bacteria are used in genetic engineering.

1 .....

.....

2 .....

..... [2]

12 Table 12.1 shows the order of bases in a part of a strand of DNA.

Table 12.1

C	
A	
A	
G	
C	
C	

Complete Table 12.1 by filling in the complementary bases to complete this part of a strand of DNA. [1]

13 Gonorrhoea is a sexually transmitted disease.

State **two** signs or symptoms of gonorrhoea.

1 .....

2 ..... [2]

14 Name **two** products of anaerobic respiration in yeast other than energy.

1 .....

2 ..... [2]

15 State **two** social problems that arise from heroin abuse.

1 .....

2 ..... [2]

16 Fig. 16.1 illustrates stages in the development of immunity against chicken pox in a human being.

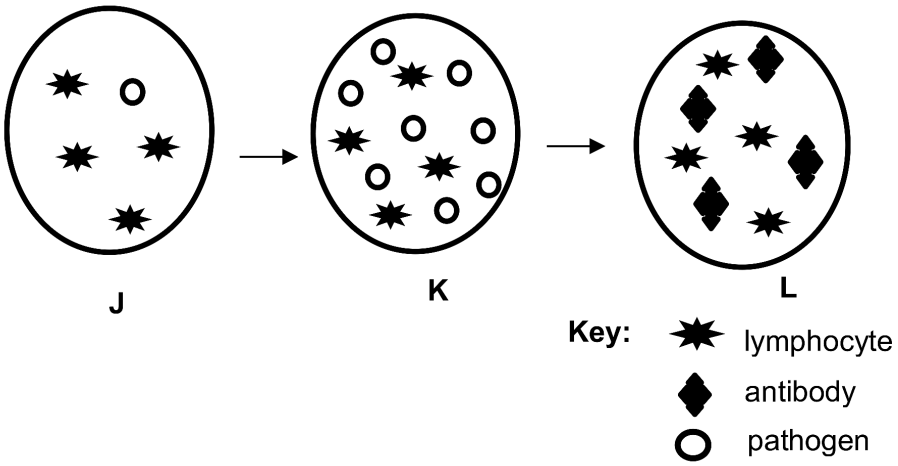

Fig. 16.1

(a) Name the stage where the person becomes ill in Fig. 16.1.

..... [1]

(b) Explain why the person is not likely to suffer from chicken pox again.

.....

.....

..... [2]

17 State the term used to describe development that provides for the needs of an increasing human population without harming the environment.

..... [1]

18 Describe the distribution and function of rods in the eye.

distribution .....

function ..... [2]

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