

SECTION A

- Answer **all** the questions.
- For each question there are four possible answers **A, B, C** and **D**. Choose the one you consider correct and shade your choice in soft pencil on the separate answer sheet.

1 Identify the person least likely to transfer pathogens to the food they are preparing.



A



B



C



D

(1)

2 The common cold is an example of a disease caused by a

- A bacterium.
- B protozoan.
- C virus.
- D worm.

(1)

3 The symptom of gonorrhoea in males is

- A blisters around the genitals.
- B a burning sensation when urinating.
- C fever and rash on the body.
- D hard red ulcers around the genitals.

(1)

4 If a pregnant woman is infected with one of the following STDs, the baby might be born blind.

- A AIDS
- B Gonorrhoea
- C Herpes
- D Syphilis

(1)

5 The Primary Health Care programme of Namibia is based on the government's belief that:

- A doctors are important in our lives.
- B health care is expensive.
- C health is a basic human right.
- D Namibia is an unhealthy country.

(1)

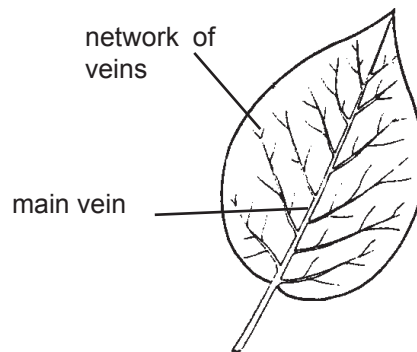
6 In Namibia new-born babies are vaccinated against two diseases. The two diseases are

- A diphtheria and tetanus.
- B polio and whooping cough.
- C smallpox and measles.
- D TB and polio. (1)

7 On a microscope the eye-piece shows 10x and the objective lens 50x. What will be the total magnification on an object viewed through this microscope?

- A 10
- B 50
- C 60
- D 500 (1)

8 The leaf in the diagram is an example of:



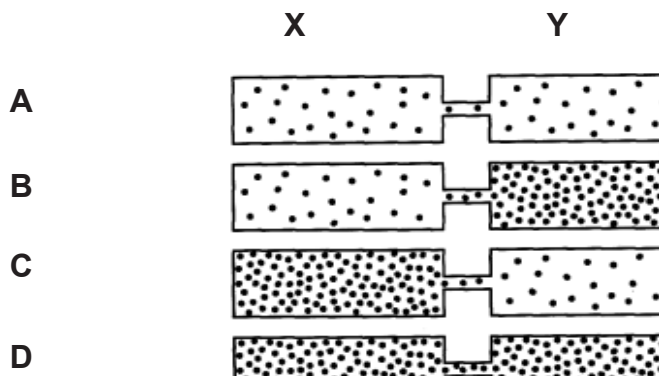
- A dicotyledons.
- B fungi.
- C monocotyledons.
- D protista. (1)

9 A special kind of diffusion that involves the movement of water molecules through a special membrane is called

- A active transport.
- B diffusion.
- C osmosis.
- D transpiration. (1)

10 The dots represent molecules of a gas in four tubes.

In which tube do more molecules move from X to Y than in the opposite direction?



(1)

11 Which of the following factors does not affect the rate of diffusion?

- A air currents
- B surface area
- C temperature
- D water

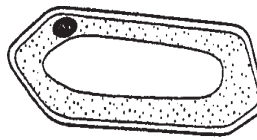
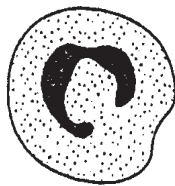
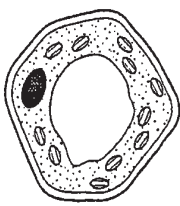
(1)

12 The smallest group into which organisms are divided is

- A class.
- B order.
- C phylum.
- D species.

(1)

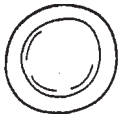
13 Name the structures which these cells have in common.



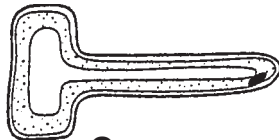
- A cell membrane and cell wall
- B cell membrane and nucleus
- C chloroplast and cell wall
- D chloroplast and nucleus

(1)

14 Identify the two cells that are modified to increase absorption.



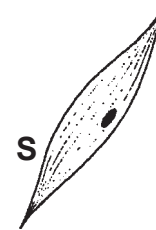
P



Q



R

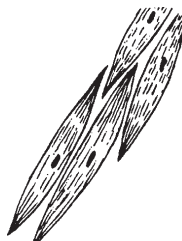


S

- A P and Q
- B Q and R
- C R and S
- D S and Q

(1)

15 Identify the tissue represented by the diagram below.



- A blood tissue
- B muscle tissue
- C nerve tissue
- D skin tissue

(1)

16 The diagram below shows four people relaxing in different ways.



A



B



C



D

Choose the method which is most likely to promote good health. (1)

17 Identify the list which represents four different organ systems.

- A heart, lung, liver, brain
 - B nose, trachea, bronchi, lungs
 - C spinal cord, brain, nerves, skin
 - D testis, urethra, kidney, bladder
- (1)

18 Identify the deficiency disease that results from a lack of iron in the human diet.

- A anaemia
 - B marasmus
 - C rickets
 - D scurvy
- (1)

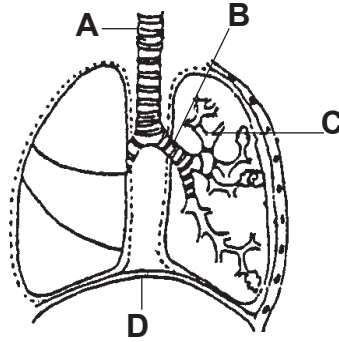
19 Identify the line which matches a mineral correctly with its function.

	Mineral	Function	
A	Calcium	Supports production of a hormone thyroxine.	
B	Iodine	Develops bones and teeth.	
C	Iron	Transports oxygen in the blood.	
D	Phosphorus	Maintains the salt balance in our blood.	(1)

20 Give the element, usually obtained from the soil, that plants need to make proteins.

- A carbon
 - B hydrogen
 - C nitrogen
 - D oxygen
- (1)

- 21 On the diagram, which labelled part is the diaphragm? (1)



- 22 The following numbered parts belong to the respiratory system.

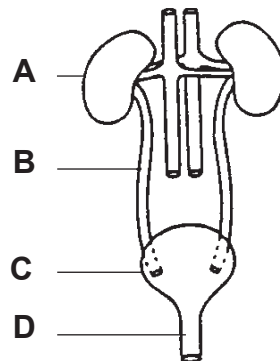
1. alveoli 2. bronchi 3. trachea 4. bronchioles

Give the right order in which air passes through these organs.

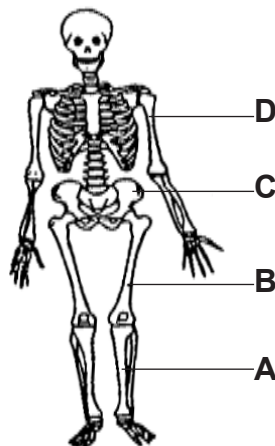
A	1	2	3	4
B	1	4	2	3
C	3	2	4	1
D	3	4	2	1

(1)

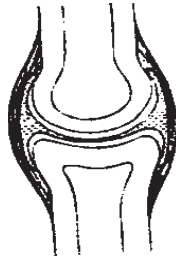
- 23 Give the labelled structure that stores urine. (1)



- 24 Name the labelled part on the diagram that indicates the pelvic girdle. (1)



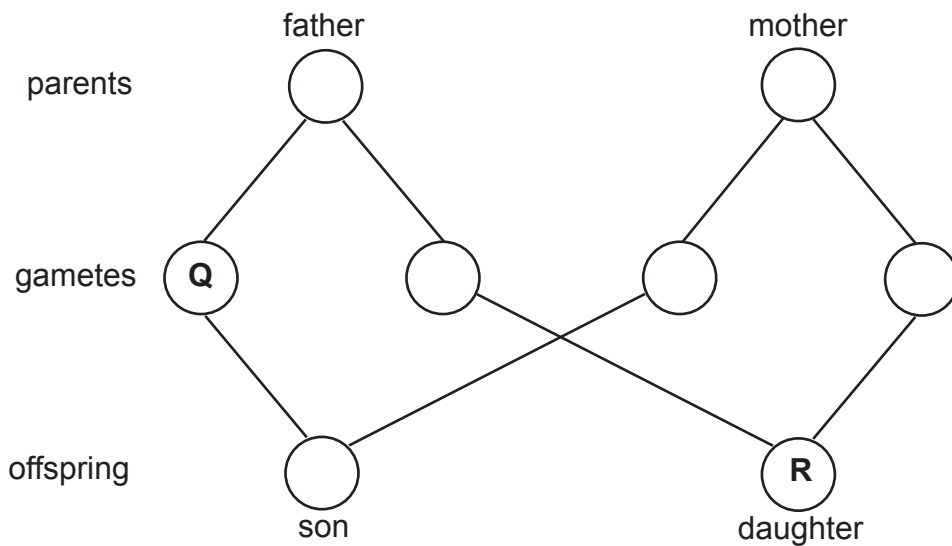
25 Name the type of joint shown in the diagram.



- A ball and socket joint
- B fixed joint
- C hinge joint
- D sliding joint

(1)

26 The diagram shows the fusion of gametes to produce a son and a daughter.



Identify which chromosome/s will be present in **Q** and **R**.

(1)

27 Identify the gas which contributes most to global warming.

- A carbon dioxide
- B CFCs
- C nitrogen oxide
- D water vapour

(1)

28 If radioactive waste contaminates an area, people living nearby may suffer from

- A** bronchitis.
- B** cancer.
- C** sunburn.
- D** TB.

(1)

29 The production of rice causes the release of one of the following gases that also contributes to global warming.

- A** carbon dioxide
- B** CFCs
- C** methane
- D** nitrous oxide

(1)

30 What will be the effect of pesticides, such as dieldrin and DDT, when washed into a river?

- A** Carbon dioxide is added to the water.
- B** Massive weed growth occurs in the water.
- C** Organisms in the water are killed.
- D** Oxygen is removed from the water.

(1)

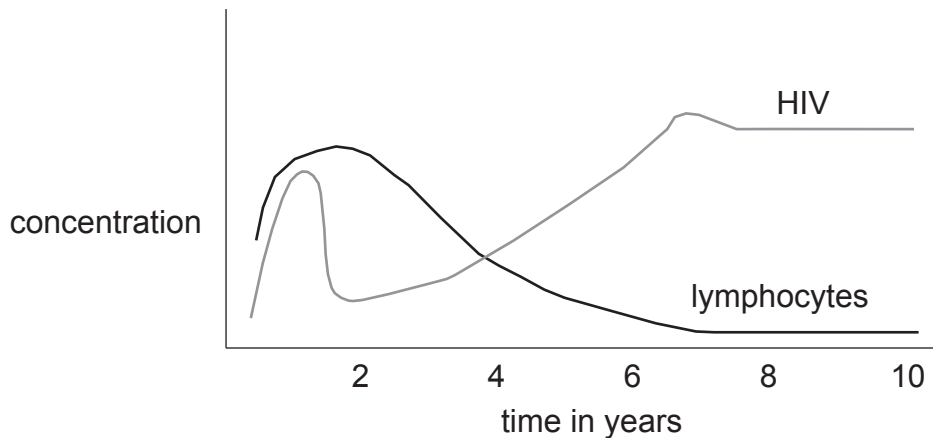
[30]

SECTION B

- Answer **all** the questions in this section.
- Use a pencil when making drawings.
- Draw a line after each question.

QUESTION 1

The graph below shows the lymphocytes and HIV concentration in the blood of an infected person.

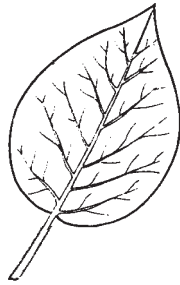


- (a) Explain the increase of HIV shown in the graph. (2)
- (b) How many years after infection could this person be said to have full-blown AIDS? (1)
- (c) List **two** symptoms that might indicate that the patient has AIDS. (2)
- (d) Name the most effective contraceptive that can be used to prevent infection with HIV. (1)
- (e) (i) Discuss why tuberculosis can be described as a "social disease". (3)
- (ii) List **three** symptoms of tuberculosis. (3)

[12]

QUESTION 2

This is a diagram of a leaf.



(a) (i) Make a large outline drawing of the leaf and label the petiole/stalk. (3)

(ii) The original length of the leaf is 30 mm. Assume that the length of the leaf you have drawn is 90 mm, calculate the magnification. (3)
(Show your working.)

[6]

QUESTION 3

(a) List and define any **two** characteristics of living organisms. (4)

(b) The picture shows living and non-living things.



(i) List any **two** living things from the picture. (2)

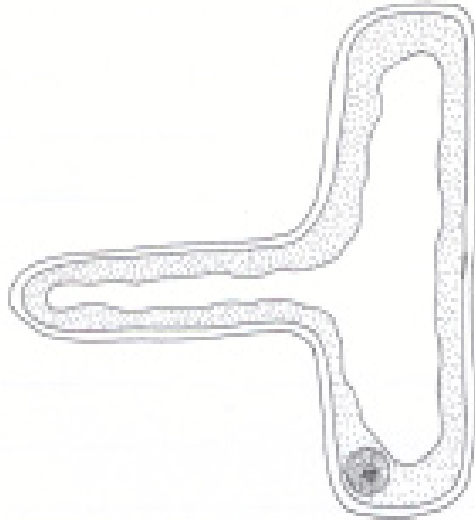
(ii) Name any **two** non-living things from the picture. (2)

(c) Describe any **three** characteristics of living organisms that are similar to those of a motor car. (3)

[11]

QUESTION 4

- (a) A plant cell is an example of a eukaryotic cell. Draw and label a simple plant cell as seen under the light microscope. (7)
- (b) Compare in table form any **three** differences between eukaryotic and prokaryotic cells. (6)
- (c) This is a diagram of a root hair cell.

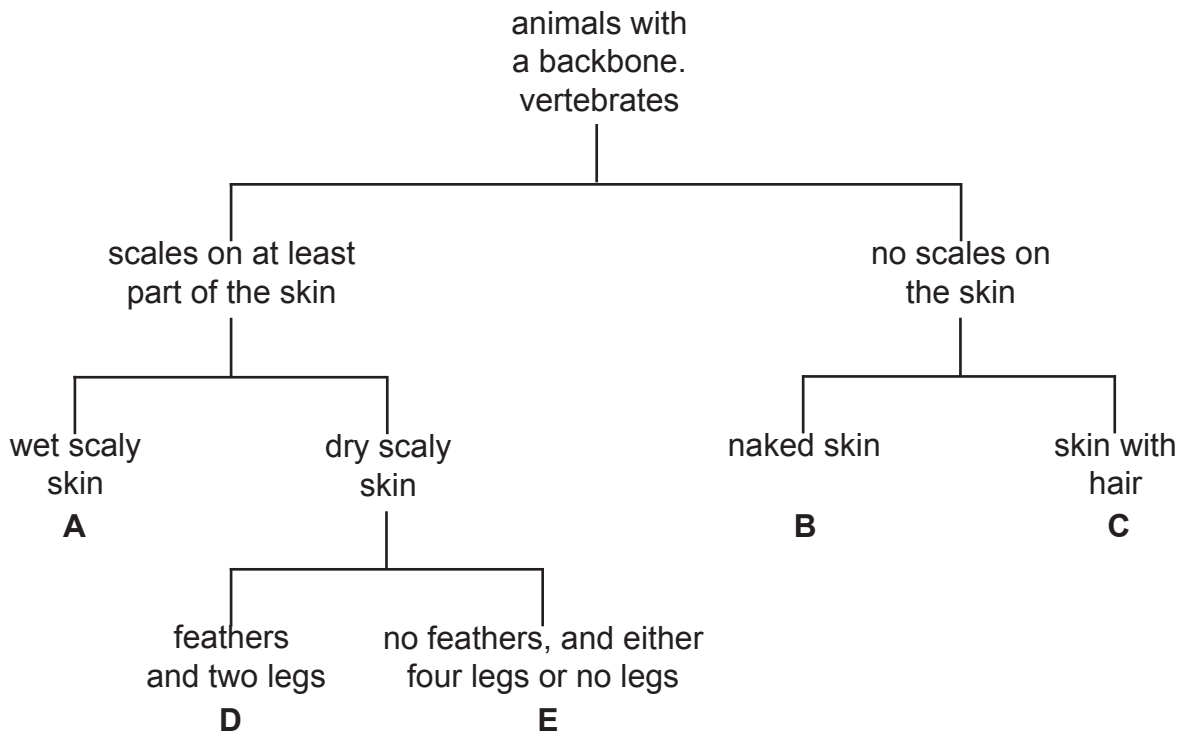


- (i) Name the process through which water is moved from the soil into the root hair. (1)
- (ii) Define the abovementioned process. (2)

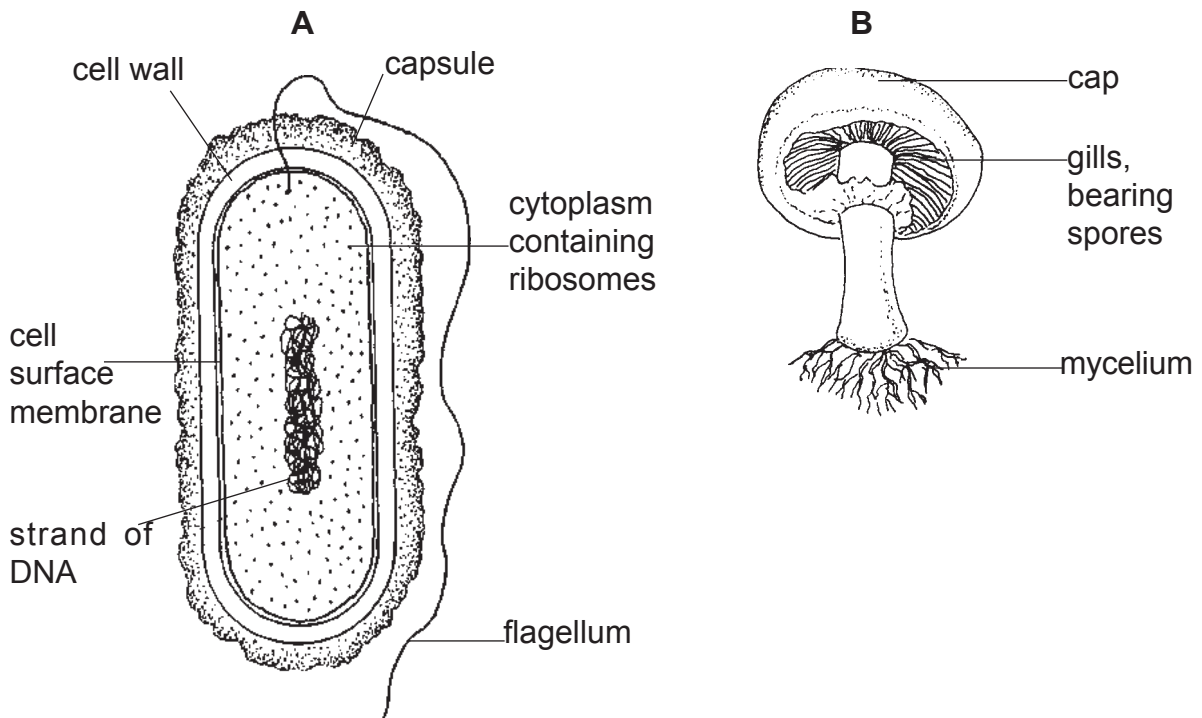
[16]

QUESTION 5

(a) Use the diagram to identify the main classes of vertebrates represented by the letters **A**, **B**, **C**, **D** and **E**. (5)



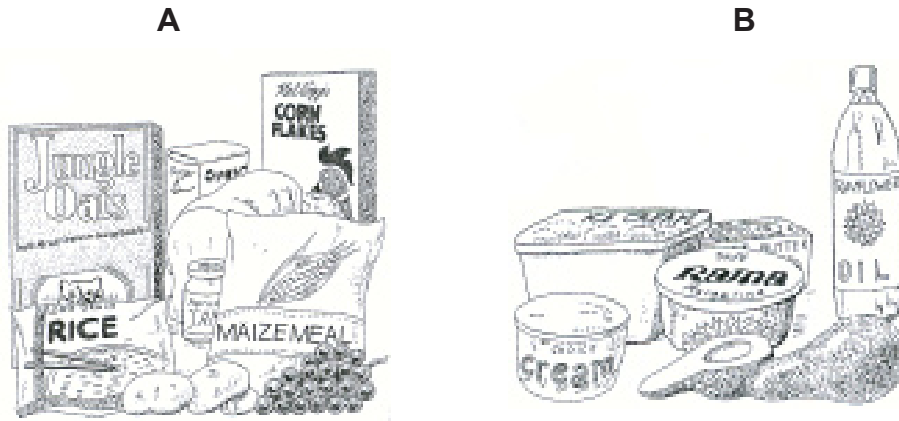
(b) Look at the pictures and identify the two kingdoms represented by **A** and **B**. (2)



[7]

QUESTION 6

Study the examples of different food types.

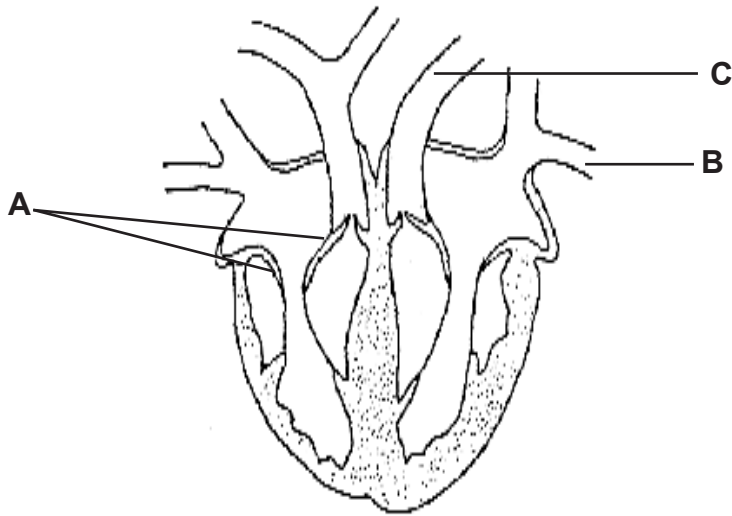


- (a) Identify the nutrients **A** and **B** present in each group of food types. (2)
- (b) (i) Give **one** function of nutrient **B**. (1)
- (ii) Name the disease caused by a lack of nutrient **A** in your diet. (1)
- (iii) Explain why a fourteen-year-old boy needs more energy than an old man. (3)

[7]

QUESTION 7

(a) The figure shows a section through the heart.

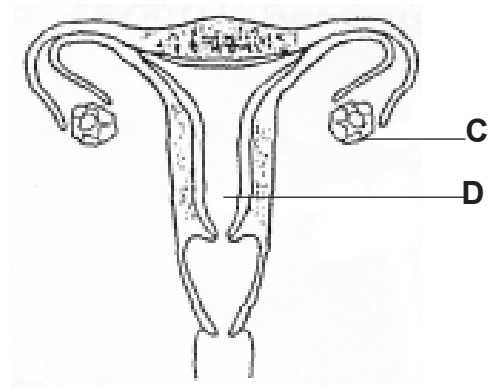
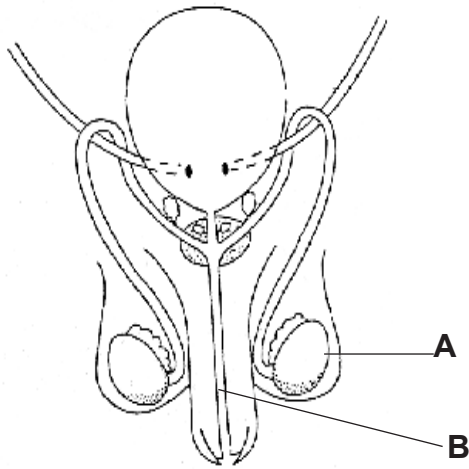


- (i) Name the parts labelled **A**, **B** and **C**. (3)
- (ii) The coronary arteries supply oxygen to the heart muscle. Suggest **two** human activities, or a lack thereof, which might cause a clot in a coronary artery. (2)
- (iii) Explain what might be the result of such a blockage. (2)

[7]

QUESTION 8

Study the diagrams of the reproductive organs of a male and female.



(a) Label parts **A**, **B**, **C** and **D**.

(4)

(b) Write down the numbers (i) - (iv) and next to each the correct description.

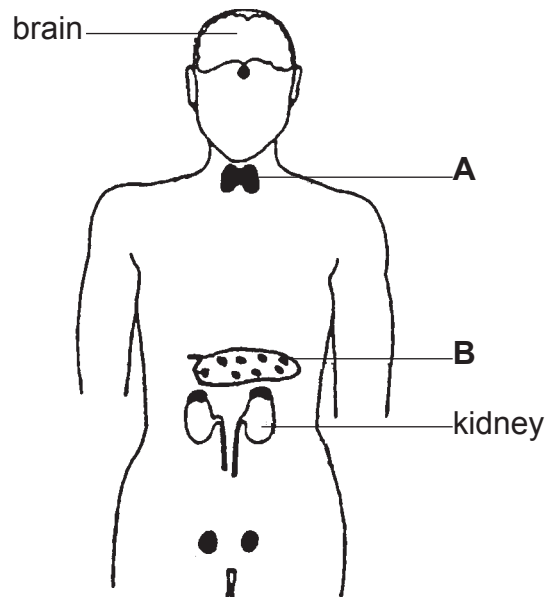
- | | |
|--------------------|--|
| (i) testis | the fusion of a male and female gamete |
| (ii) gamete | place where sperms are stored |
| (iii) sperms | place where sperms are produced |
| (iv) fertilisation | the biological name for a sex cell |
| male sex cells | |

(4)

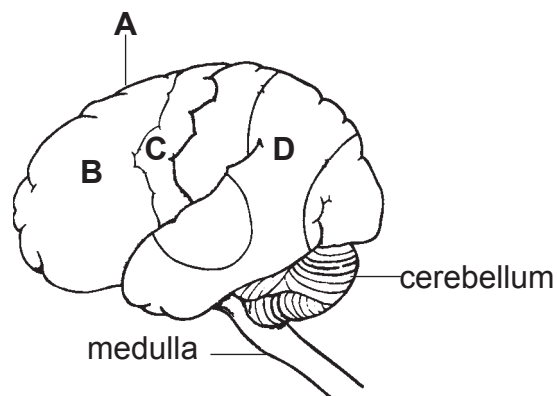
[8]

QUESTION 9

The diagram below shows positions of glands in the human body.



- (a) Identify the glands labelled **A** and **B**. (2)
- (b) Bennie is 13 years old. He is concerned about the deepening of his voice.
- (i) Which hormone is responsible for this condition? (1)
- (ii) Name the glands responsible for that condition. (1)
- (c) The brain is part of the central nervous system.

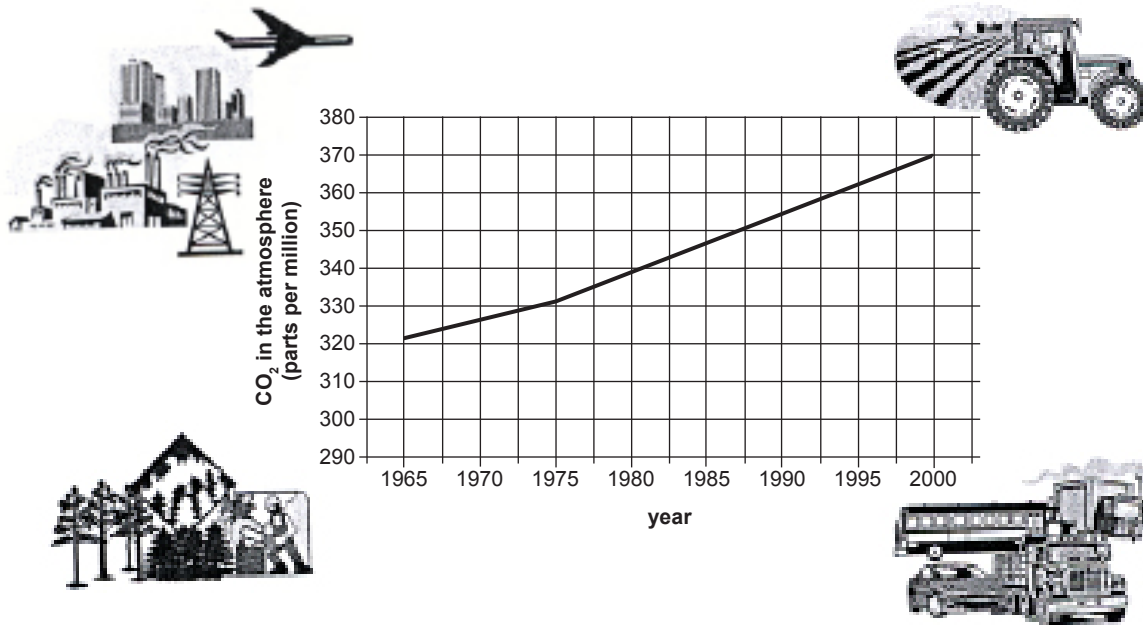


- (i) Name part **A**. (1)
- (ii) Part **A** can be subdivided into areas. Identify areas **B**, **C** and **D**. (3)

[8]

QUESTION 10

The figure shows some major causes of global warming and the increase in carbon dioxide (CO₂) in the earth's atmosphere since 1965.



- (a) (i) Define the term *global warming*. (1)
- (ii) Using the graph, read off the increase of CO₂ between the years 1965 and 2000. (1)
- (iii) Explain the influence that the increase of CO₂ in the atmosphere has on global warming. (2)
- (b) Deforestation is one of the processes which increase the CO₂ in the atmosphere.
- (i) List **two** other processes that also increase the CO₂ in the atmosphere. (2)
- (ii) Name **one** process that decreases the CO₂ in the atmosphere. (1)
- (iii) Suggest how governments can contribute to the prevention of deforestation. (3)
- (c) Suggest **three** effects that global warming can have on Namibia. (3)
- (d) Sometimes human activities can damage the ozone layer which causes UV rays to reach the earth.
- (i) Give the name of the gas that can deplete the ozone layer. (1)
- (ii) List any **two** activities that release this gas into the atmosphere. (2)
- (iii) Explain the importance of the ozone layer. (2)

[18]

Total: [130]