

EXAMINATIONS COUNCIL OF ESWATINI
Eswatini Primary Certificate

SCIENCE

513/01

Paper 1 Multiple Choice

October/November 2022

1 hour

Additional Materials: Multiple Choice answer sheet

Soft clean eraser

Soft pencil (type B or HB recommended).

READ THESE INSTRUCTIONS FIRST

Write in soft pencil.

Write your centre number, candidate number and name on the answer sheet in the spaces provided unless this has been done for you.

There are **forty** questions on this paper.

Answer **all** questions.

For each question there are four possible answers **A, B, C** and **D**.

Choose the **one** you consider correct and record your choice in **soft pencil** on the separate Answer Sheet.

Read the instructions on the separate answer sheet carefully.

Each correct answer will score one mark. A mark will not be awarded for a wrong answer.

Any rough work should be done on this Question Paper and **not** on the Answer Sheet.

This document consists of **16** printed pages and **4** blank pages.

- 1 Fig. 1.1 shows the female reproductive system in a human being.

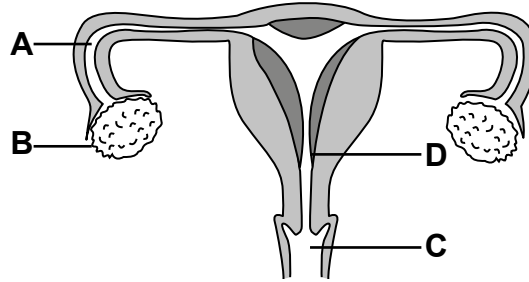


Fig. 1.1

In which part, **A**, **B**, **C** or **D** does fertilisation take place?

- 2 Fig. 2.1 shows blood components as seen under a microscope.

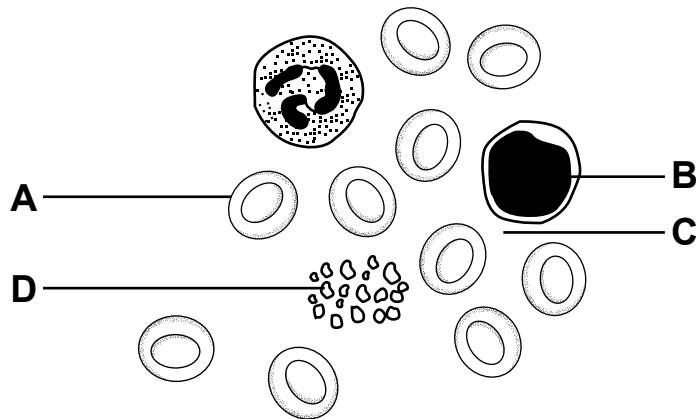


Fig. 2.1

Which part, **A**, **B**, **C** or **D** carries oxygen to the muscles?

- 3 Which structure in a flower produces pollen?

- A** style
- B** sepal
- C** stigma
- D** anther

- 4 Fig. 4.1 shows the approximate percentage composition of air by volume.

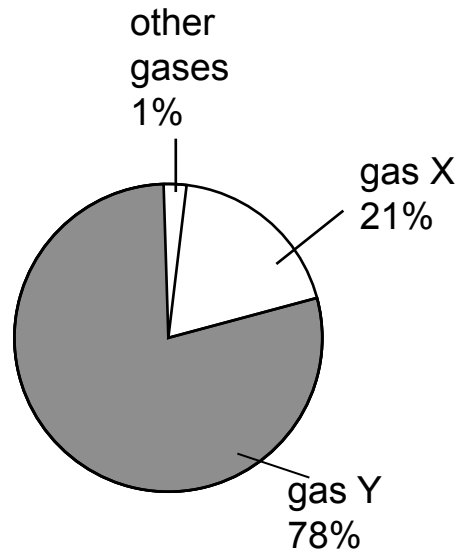


Fig. 4.1

What are the gases **X** and **Y**?

	gas X	gas Y
A	oxygen	carbon dioxide
B	carbon dioxide	nitrogen
C	oxygen	nitrogen
D	nitrogen	oxygen

- 5 What is the purpose of inhaling in living organisms?
- A** to enrich the atmosphere with oxygen
 - B** to take carbon dioxide into the lungs
 - C** to supply water for the organism
 - D** to take oxygen into the lungs

- 6 Fig. 6.1 shows a cell as seen by some learners under a microscope.

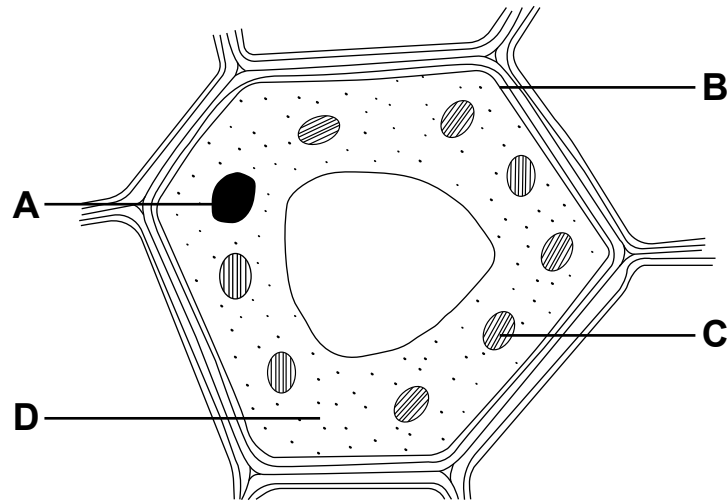


Fig. 6.1

Which structure **A**, **B**, **C** or **D** shows that the cell is from a plant and **not** from an animal.

- 7 Fossil fuels are non-renewable sources of energy.

What are non-renewable sources of energy?

- A** Energy sources that cause pollution.
- B** Energy sources that get used up over time.
- C** Energy sources that are made from dead plants.
- D** Energy sources that are difficult to dig out of the ground.

- 8 Two boys want to measure the time taken by a toy car to move across a table.

What instrument should they use to measure the time?

- A** stop watch
- B** thermometer
- C** tape measure
- D** measuring cylinder

- 9 Which list **A**, **B**, **C** or **D** contains **only** the conditions that are necessary for germination to occur?
- A** oxygen, light and moisture
- B** oxygen, light and a suitable temperature
- C** oxygen, moisture and a suitable temperature
- D** oxygen, light, water and a suitable temperature
- 10 Fig. 10.1 shows a light ray passing through a glass prism.

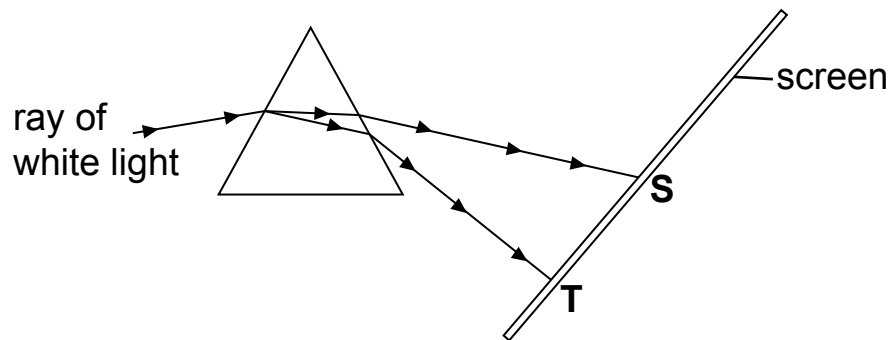


Fig. 10.1

Which colours are represented by the letters **S** and **T**?

- | | S | T |
|----------|----------|----------|
| A | red | green |
| B | red | violet |
| C | violet | red |
| D | violet | green |
- 11 Which statement correctly matches the function of vitamin C in the body?
- A** to provide energy to do work
- B** helps to maintain healthy gums
- C** formation of strong bones and teeth
- D** for formation of haemoglobin in red blood cells

12 Fig. 12.1 shows apparatus used in filtration.

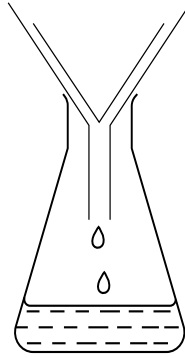


Fig. 12.1

Why is this apparatus not suitable to separate a sugar and salt solution?

- A** sugar and salt do not mix
- B** sugar and salt both dissolve in water
- C** sugar is soluble while salt is insoluble
- D** sugar and salt have same size particles

13 Fig. 13.1 shows part of an electromagnet.

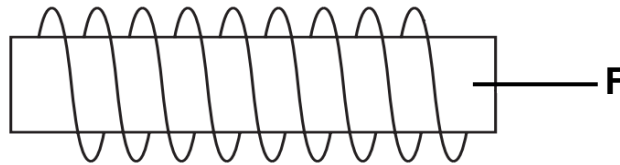


Fig. 13.1

What material is used to make the part labelled **F**?

- A** iron
- B** steel
- C** silver
- D** copper

14 States of matter have certain properties.

Which substance **A**, **B**, **C** or **D** has a fixed shape and volume?

- A** air
- B** milk
- C** water
- D** stone

15 A student adds vinegar to bicarbonate of soda and bubbles are formed.

What does the formation of bubbles tell about the combination of vinegar and bicarbonate of soda?

- A** a basic mixture is formed
- B** a physical change occurs
- C** a chemical change occurs
- D** an acidic mixture is formed

16 The sun is a clean source of energy.

Which other sources provide clean energy?

- A** coal and oil
- B** wind and coal
- C** water and coal
- D** wind and water

17 Fig. 17.1 shows three types of magnets.

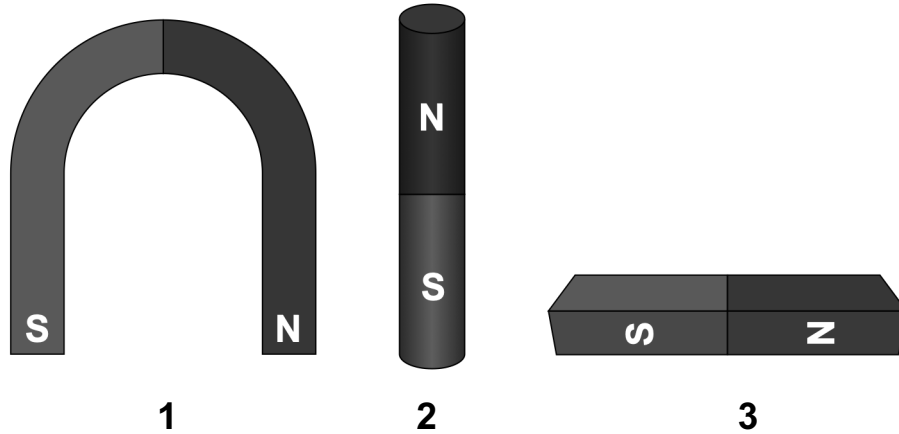


Fig. 17.1

Which list **A**, **B**, **C** or **D** shows the correct types of magnets?

	1	2	3
A	horse shoe	cylindrical	bar
B	horse shoe	bar	cylindrical
C	bar	cylindrical	horse shoe
D	bar	horse shoe	cylindrical

18 Fig. 18.1 shows an experiment carried out by a learner to find the density of a liquid.

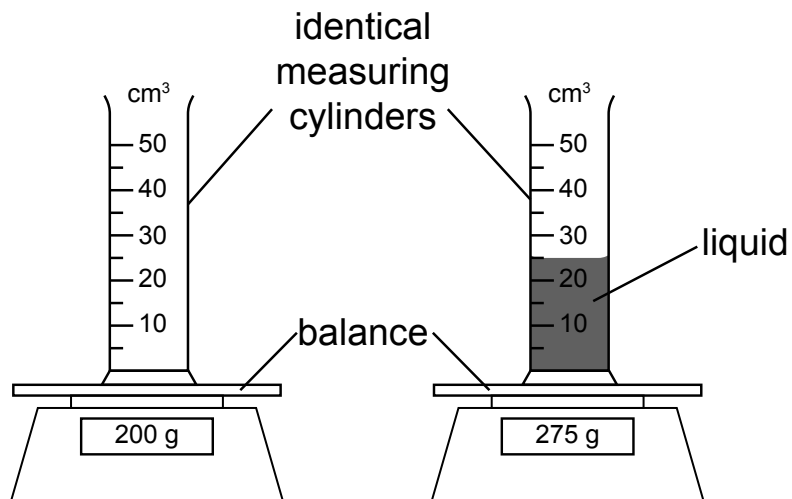


Fig. 18.1

What is the density of the liquid?

- A 3 g/cm³
- B 11 g/cm³
- C 25 g/cm³
- D 75 g/cm³

- 19 Fig. 19.1 shows two magnets placed on top of each other on a wooden base.

The magnets are not able to touch each other.

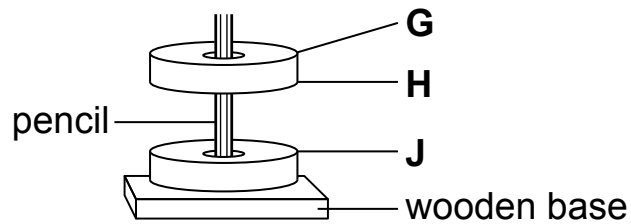


Fig. 19.1

Which poles do the letters G, H and J represent?

	G	H	J
A	south	south	south
B	south	north	south
C	north	south	north
D	north	south	south

- 20 Fig. 20.1 shows the water cycle.

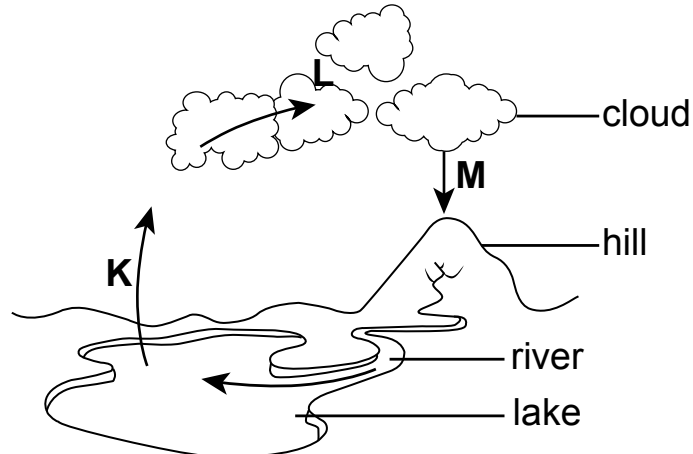


Fig. 20.1

Which processes occur at letters K, L, and M?

	K	L	M
A	transpiration	evaporation	precipitation
B	precipitation	evaporation	condensation
C	evaporation	condensation	precipitation
D	evaporation	precipitation	transpiration

21 Bee stings contain an alkali.

The table shows some pH values of some substances.

substance	pH value
salt solution	7.0
limewater	12.1
vinegar	3.4
saliva	7.3

Which substance can be used to treat a bee sting?

- A saliva
- B vinegar
- C limewater
- D salt solution

22 What is the difference between a clinical thermometer and an ordinary thermometer?

- A The ordinary thermometer measures shorter temperature range.
- B The clinical thermometer measures a wider temperature range.
- C The ordinary thermometer does not have a scale.
- D The clinical thermometer has a kink.

- 23** A Grade seven class carries out an experiment to find out how the temperature of hot water changes over time.

Fig. 23.1 shows how the temperature changes over time.

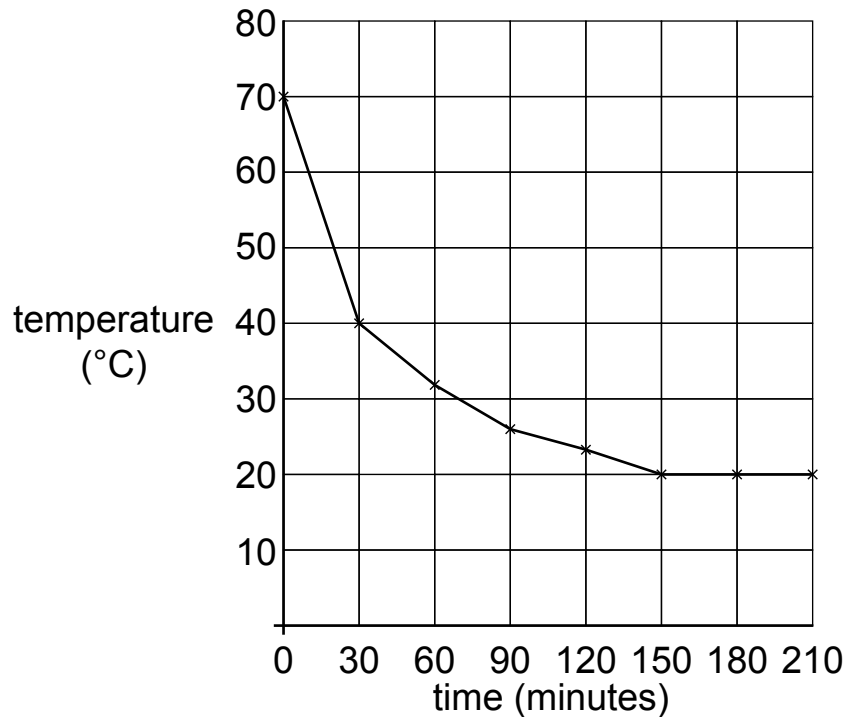


Fig. 23.1

How long does it take for the water to stop cooling?

- A** 30 minutes
 - B** 90 minutes
 - C** 150 minutes
 - D** 210 minutes
- 24** During the COVID-19 lockdown, some learners were learning using video conferencing technologies such as zoom and google classroom.
- Which other technology **A**, **B**, **C** or **D** could be used for video conferencing?
- A** skype
 - B** intercom
 - C** television
 - D** telephone

- 25** Television and computer games are some technologies used for leisure and entertainment.

What is the disadvantage of such technologies?

- A** Television and computer games are good for the eyes.
- B** Television and computer games help learners to study.
- C** Television and computer games are addictive.
- D** Television and computer games are fun.

- 26** A learner puts blue litmus paper into a colourless liquid, and it changes red.

Which statement about the colourless liquid is correct?

- A** It is an indicator
- B** It is an alkali
- C** It is an acid
- D** It is neutral

- 27** A cloud is threadlike and is found high up in the sky.

What type of cloud is it?

- A** cirrus
- B** nimbus
- C** cumulus
- D** stratus

- 28** Which list shows examples of the effects of heavy storms on animals?

- A** change of habitat, loss of food and loss of nesting sites
- B** abundance of food, fresh water, and clean air
- C** damage of property, loss of power and floods
- D** drought, increased temperatures, and soil erosion

29 Which of the following changes occur in boys during puberty?

- A hips widen
- B menstruation starts
- C sexual organs grow bigger
- D a yellow discharge is released

30 Fig. 30.1 represents a food chain.

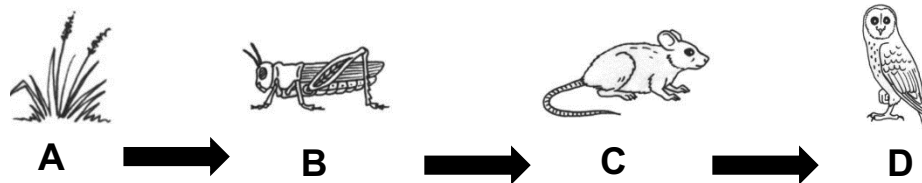


Fig. 30.1

Which letter, **A**, **B**, **C** or **D** represents a herbivore?

Use Fig. 31.1 to answer Questions 31 and 32.

A student lights up a candle and then covers it up with a glass jar. After a few minutes the candle is extinguished.

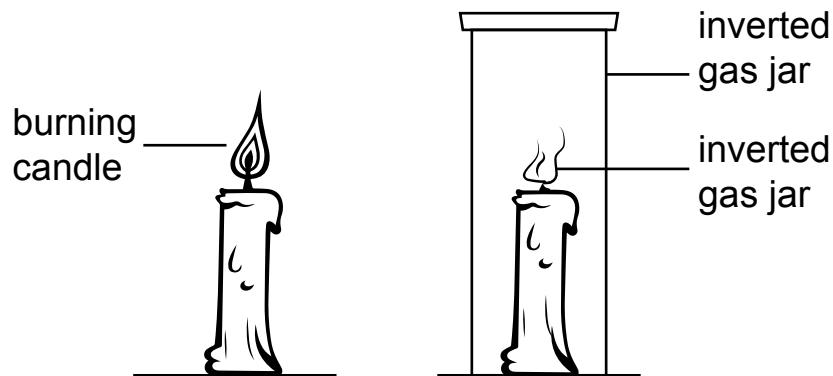


Fig. 31.1

31 Why does the candle stop burning after a few minutes?

- A The jar gets very hot.
- B The candle gets finished.
- C Oxygen in air gets finished.
- D Carbon dioxide in air gets finished.

- 32** Clear limewater is poured into the jar with the candle. The jar is shaken. What observation is made when the jar is shaken?
- A** The limewater turns milky.
 - B** The limewater changes to red.
 - C** The limewater changes to blue.
 - D** The limewater remains unchanged.
- 33** Which activity causes land pollution?
- A** over use of kraal manure
 - B** planting grass and trees
 - C** over use of herbicides
 - D** not using fertiliser
- 34** Most athletes wear wristbands and watches that monitor their heartbeats, body temperature and oxygen saturation in the blood. Which class of technology can these be classified into?
- A** technology in entertainment
 - B** technology in agriculture
 - C** technology in health
 - D** technology in safety
- 35** Why is pure gold classified as an element?
- A** It can be found underground.
 - B** It is made up of similar atoms.
 - C** It lasts long without being damaged.
 - D** It can be used to make precious things.

- 36 Fig. 36.1 shows skeletons of standing people.
Which diagram **A**, **B**, **C** or **D** shows the correct posture?

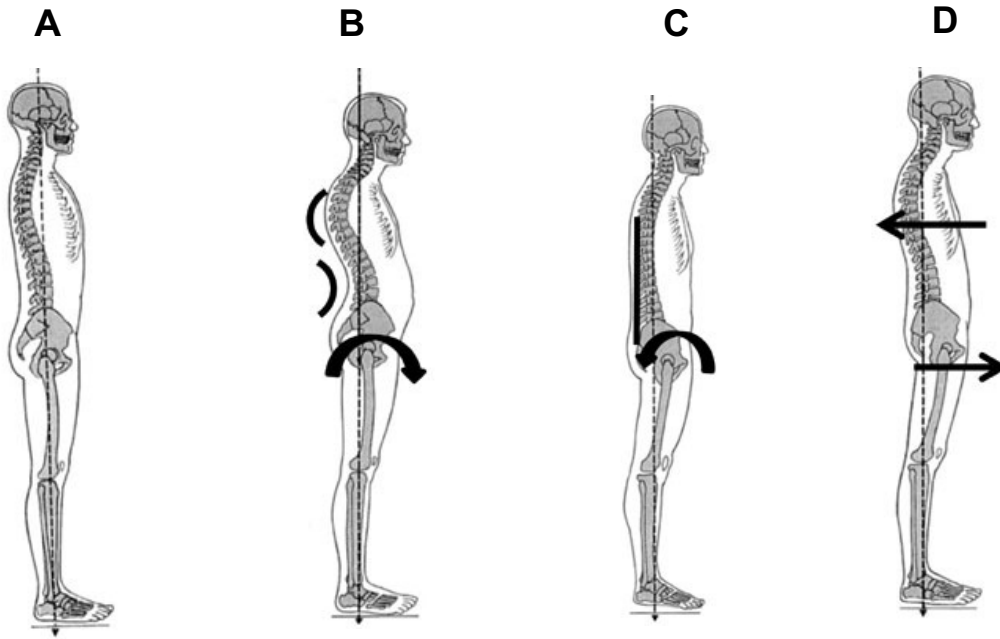


Fig. 36.1

- 37 Fig. 37.1 shows a human skeleton.

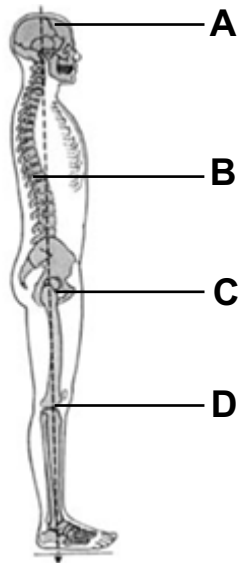


Fig. 37.1

Which letter **A**, **B**, **C** or **D** contains fixed joints?

38 Fig. 38.1 shows a box used by learners to carry some sand.

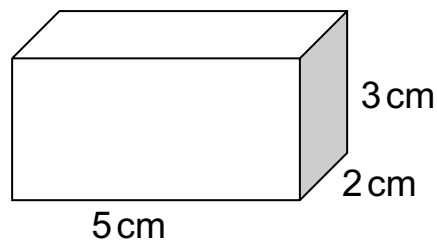


Fig. 38.1

What is the volume of sand carried in the box when it is full?

- A 6 cm^3
- B 10 cm^3
- C 15 cm^3
- D 30 cm^3

39 A child cries when given an injection.

Which stimulus is the child responding to?

- A touch
- B pain
- C fear
- D heat

40 Fig. 40.1 shows the human breathing system.

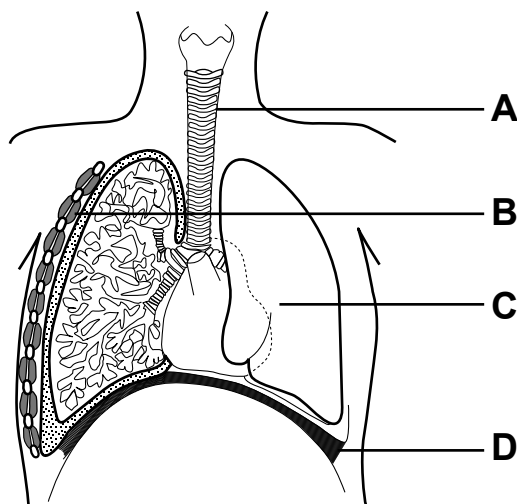


Fig. 40.1

Which part of the breathing system **A**, **B**, **C** or **D** controls breathing?

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