

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

AGRICULTURE

0600/01

Paper 1 Multiple Choice

October/November 2004

45 minutes

Additional Materials: Multiple Choice Answer Sheet
Soft clean eraser
Soft pencil (type B or HB is recommended)

READ THESE INSTRUCTIONS FIRST

Write in soft pencil.

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

Write your name, Centre number and candidate number 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.

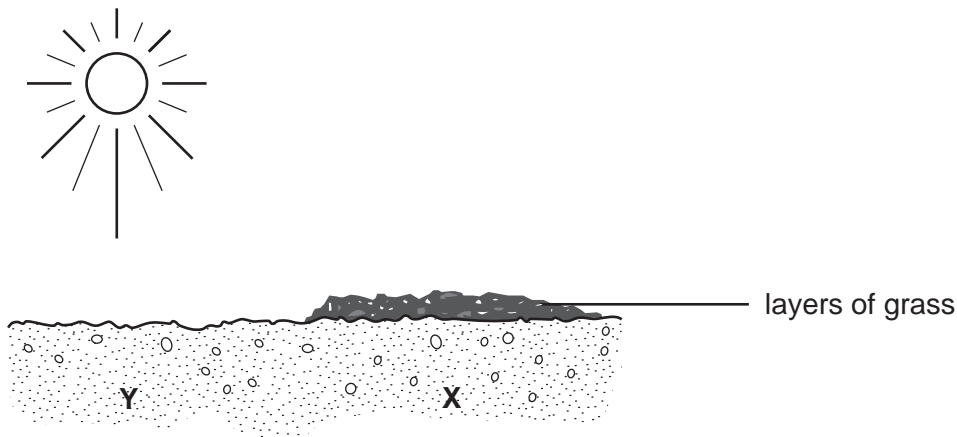
Read the instructions on the answer sheet very carefully.

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

Any rough working should be done in this booklet.

This document consists of **15** printed pages and **1** blank page.

- 1 Which livestock enterprise is **most** likely to contribute to world trade?
- A donkey breeding
 - B duck egg production
 - C farmed, unfrozen fish
 - D skin and hide production
- 2 Which statement is true for all crops grown organically?
- A They are free from chemical residues.
 - B They are resistant to diseases.
 - C They have improved growth rates.
 - D They have improved taste.
- 3 What should be added to a sandy soil in order to raise the pH?
- A compost
 - B lime
 - C potash
 - D water
- 4 The diagram shows a layer of grass and leaves in a hot, dry area where soil erosion is a problem.

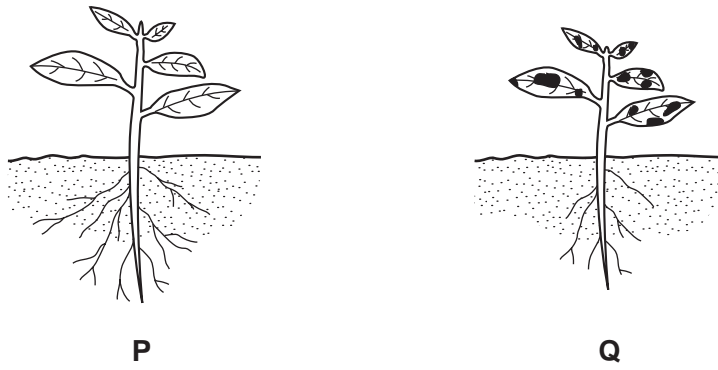


The soil at **Y** is hot and dry.

Which conditions exist in the soil at **X**?

- A Soil **X** is cooler and dryer.
- B Soil **X** is cooler and more moist.
- C Soil **X** is warmer and dryer.
- D Soil **X** is warmer and more moist.

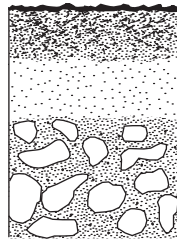
- 5 The diagram shows two seedlings from the same parent plant.



Seedling **Q** lacks a major nutrient.

Which fertiliser should be used to make up the deficiency?

- A bone meal
 - B muriate of potash
 - C sodium nitrate
 - D urea
- 6 Below is a soil diagram.

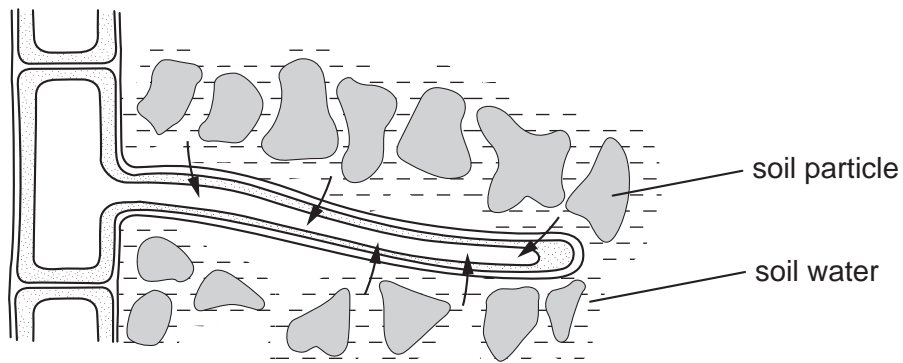


What does the diagram represent?

- A soil composition
 - B soil crumbs
 - C soil profile
 - D soil texture
- 7 Why is a large leaf area essential to produce good crops of Irish potato?
- A to develop large food storage organs
 - B to develop long deep roots
 - C to develop many large seeds
 - D to develop taller stems

4

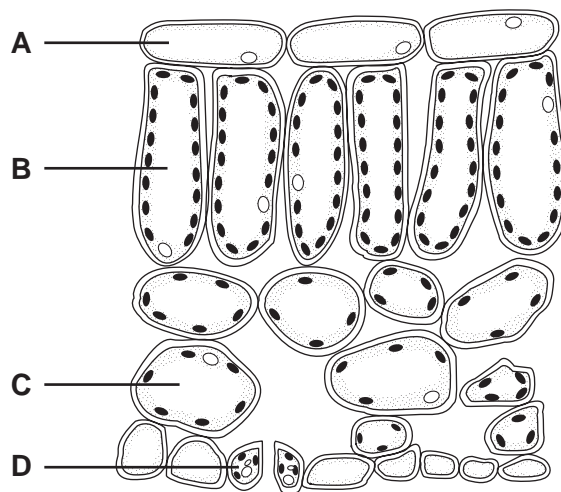
- 8 The diagram shows a root hair, soil particles and water.



Which process is shown by the arrows?

- A osmosis
 - B photosynthesis
 - C respiration
 - D transpiration
- 9 The diagram shows a section through a leaf.

Which cell does **not** contain chlorophyll?



- 10 What develops into a seed?

- A anther
- B ovary
- C ovule
- D stigma

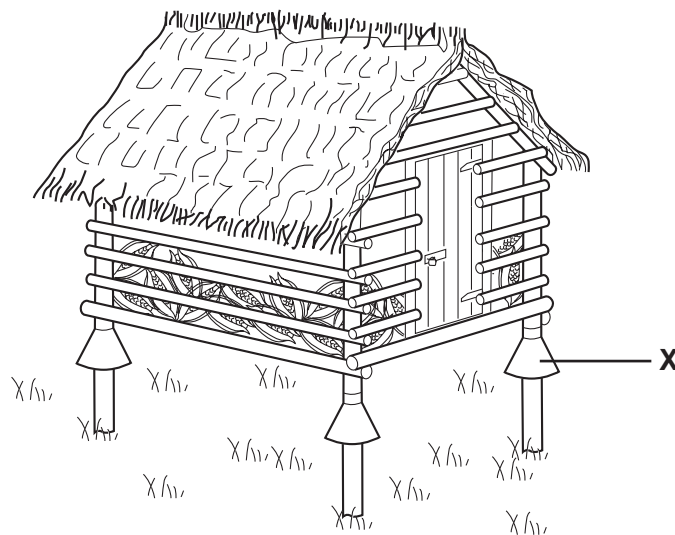
11 What is a characteristic of a wind pollinated flower?

- A coloured petals
- B feathery stigma
- C nectar
- D scent

12 What will a cereal crop provide when fed to animals?

- A carbohydrates
- B fats
- C nitrates
- D vitamin D

13 The diagram shows a storage building for a cereal crop.



What is the main purpose of **X**?

- A to prevent the entry of fungi
- B to prevent the entry of insects
- C to prevent the entry of moisture
- D to prevent the entry of rats

14 Which condition is most important when a cereal crop is being harvested?

- A dry weather
- B wet weather
- C low temperature
- D high temperature

15 How does a herbicide improve crop yield?

- A It adds nutrients to the soil.
- B It controls plant diseases.
- C It destroys pest organisms.
- D It reduces weed competition.

16 A crop is sprayed with insecticide.

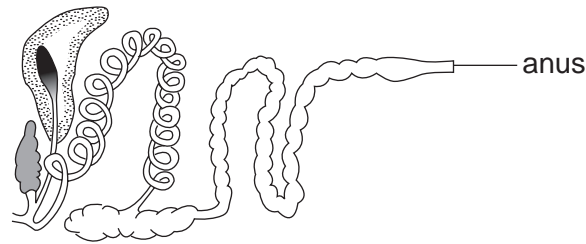
After spraying, what will damage the environment?

- A leaving the crop for two weeks before harvesting
- B not wearing protective clothing when spraying
- C spraying close to the ground
- D washing the sprayer in a stream

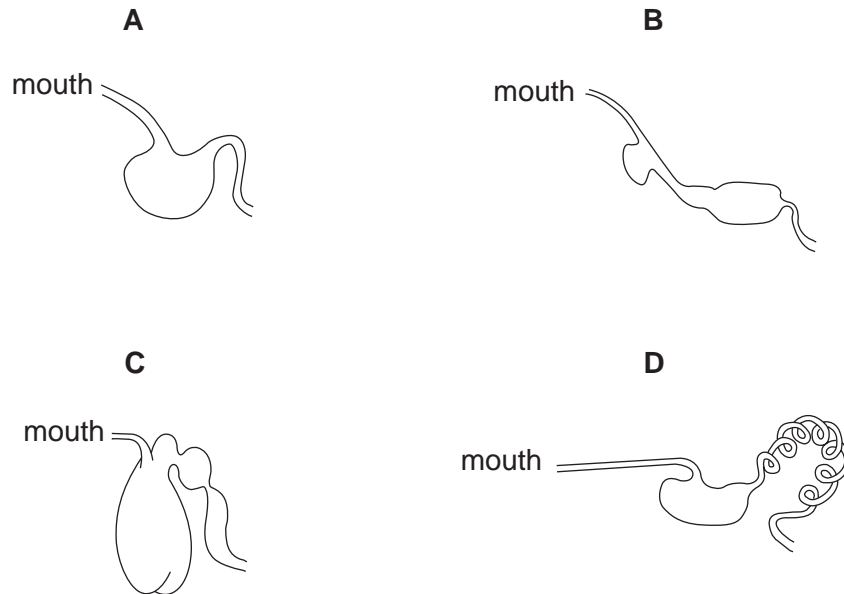
17 What is a method of biological pest control?

- A catching the pests in traps
- B introducing a predator which eats the pests
- C killing the pests with a pesticide
- D removing the pests with a hoe

18 The diagram shows part of the digestive system of a ruminant.



Which completes the diagram?



19 Where is the cervix found?

- A in the digestive system of a non-ruminant animal
- B in the digestive system of a ruminant animal
- C in the reproductive system of a female animal
- D in the reproductive system of a male animal

20 Which region in the digestive system of a non-ruminant has the pH 1.5 - 2.0?

- A colon
- B duodenum
- C mouth
- D stomach

21 In which parts of the female reproductive system do egg production and fertilisation occur?

| | egg production | fertilisation |
|----------|----------------|---------------|
| A | ovary | oviduct |
| B | oviduct | uterus |
| C | uterus | vagina |
| D | vagina | ovary |

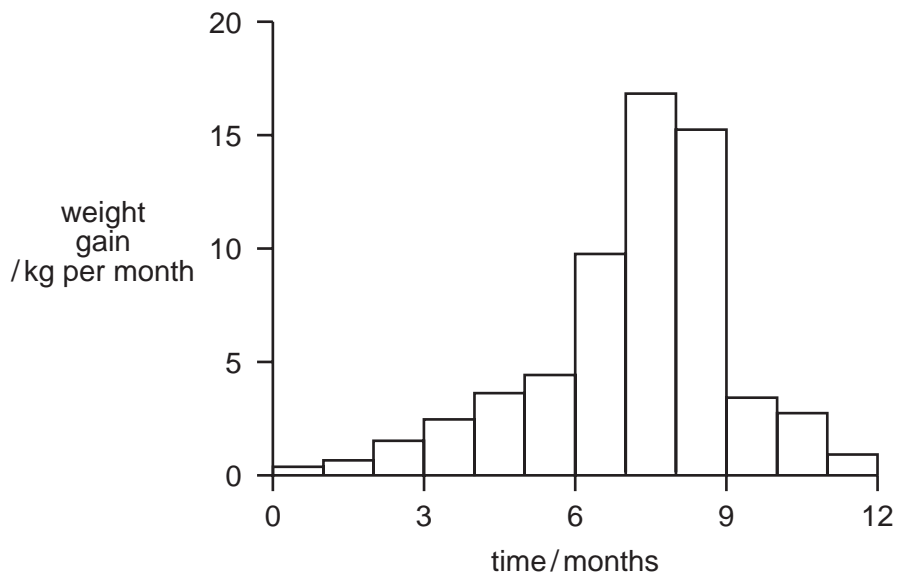
22 Why is it important that young animals have colostrum?

- A** to aid digestion
- B** to be more fertile
- C** to grow faster
- D** to resist disease better

23 Which sign indicates that a young ruminant is sick?

- A** bright eyes
- B** damp nose
- C** dirty tail
- D** smooth coat

24 The graph shows the weight gain of an animal during a 12 month period.

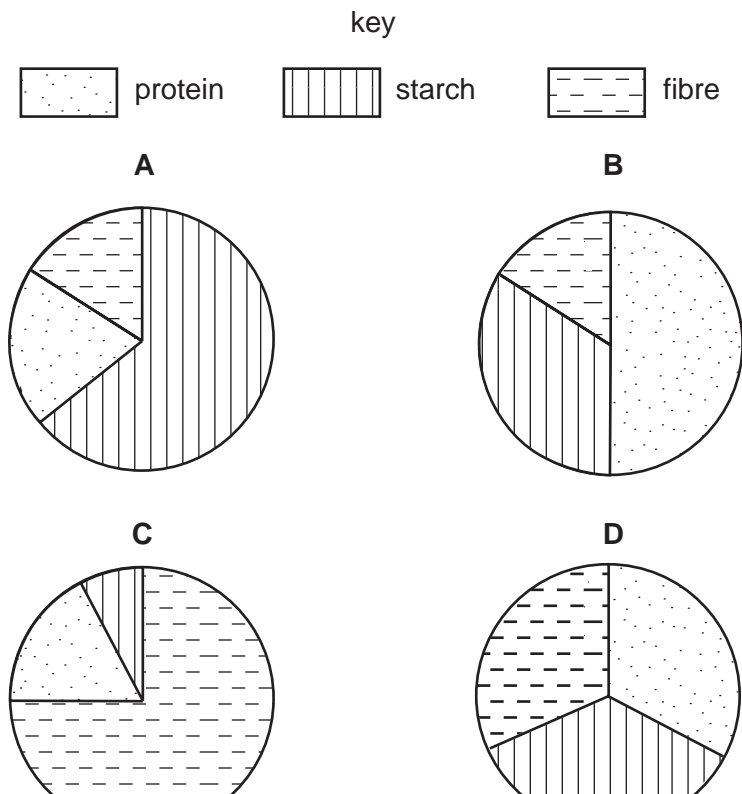


During which time period was the animal fed on a production ration?

- A 0 to 3 months
- B 3 to 6 months
- C 6 to 9 months
- D 9 to 12 months

25 The pie charts show four animal diets.

Which represents the diet of a grazing ruminant?



26 Animals are given mineral supplements to maintain good health.

Why are they given iron?

- A for their blood
- B for their bones
- C for their meat
- D for their milk

27 Which structure is the smallest?

- A cell
- B chromosome
- C gene
- D nucleus

28 A polled (hornless) bull, **Hh**, is mated with 20 horned cows, **hh**.

What will be the expected number of polled calves and horned calves?

| | polled calves | horned calves |
|----------|---------------|---------------|
| A | 0 | 20 |
| B | 10 | 10 |
| C | 15 | 5 |
| D | 20 | 0 |

29 Which stocking rate is the most intensive?

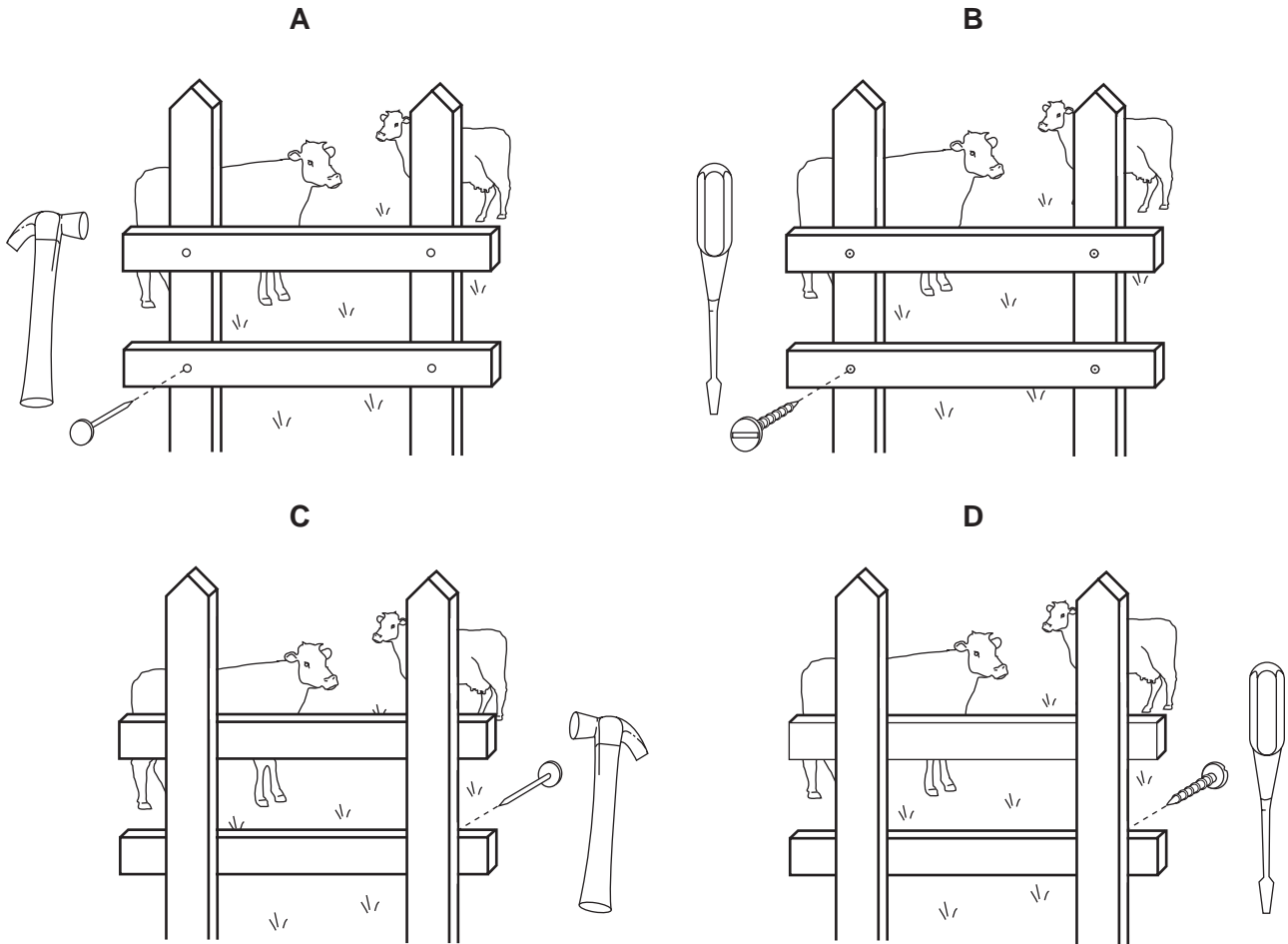
| | number of animals | number of hectares |
|----------|-------------------|--------------------|
| A | 5 | 10 |
| B | 5 | 20 |
| C | 10 | 10 |
| D | 10 | 20 |

30 A pasture has stunted grasses and many weeds common in swamps.

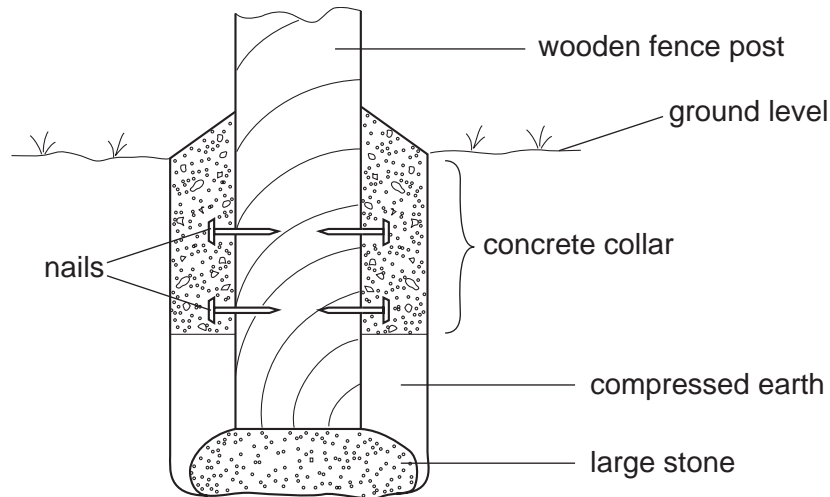
Which should be the first operation to improve this pasture?

- A application of fertiliser
- B improving drainage
- C spraying herbicides
- D spreading lime

31 Which method of fence construction should be used to contain cattle within an enclosure?



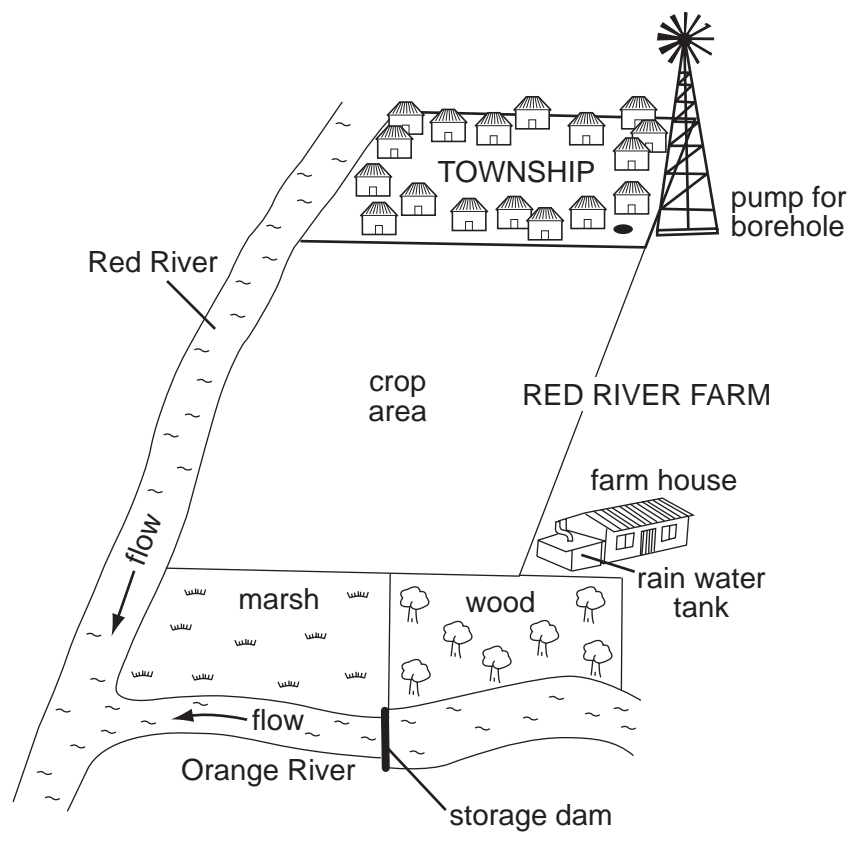
32 The diagram shows a wooden fence post set in the ground and held with a concrete collar.



Why are the nails placed in the post?

- A to allow good drainage around the post
 - B to prevent the concrete from cracking
 - C to prevent the post from rotting
 - D to secure the post to the concrete
- 33 What is added to cement to make concrete blocks?
- A gravel, sand and stones
 - B gravel, straw and stones
 - C sand, stones and water
 - D sand, straw and water
- 34 Which building materials are resistant to fire, rust and termites?
- A brick and concrete
 - B concrete and corrugated iron
 - C corrugated iron and thatch
 - D thatch and wood

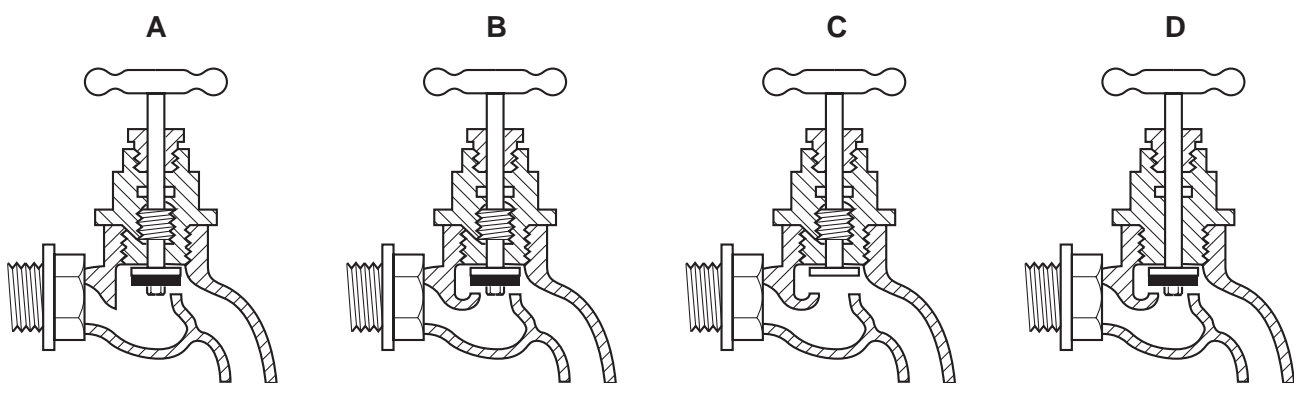
35 The diagram shows a plan of the Red River Farm and its water supplies.



What is the best source of water for crop irrigation of the land marked crop area?

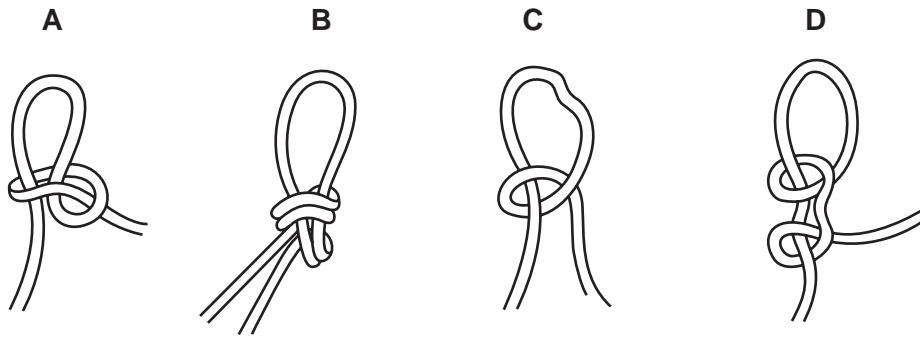
- A borehole
- B rain water tank
- C Red River
- D storage dam

36 Which diagram shows a tap that would work correctly?

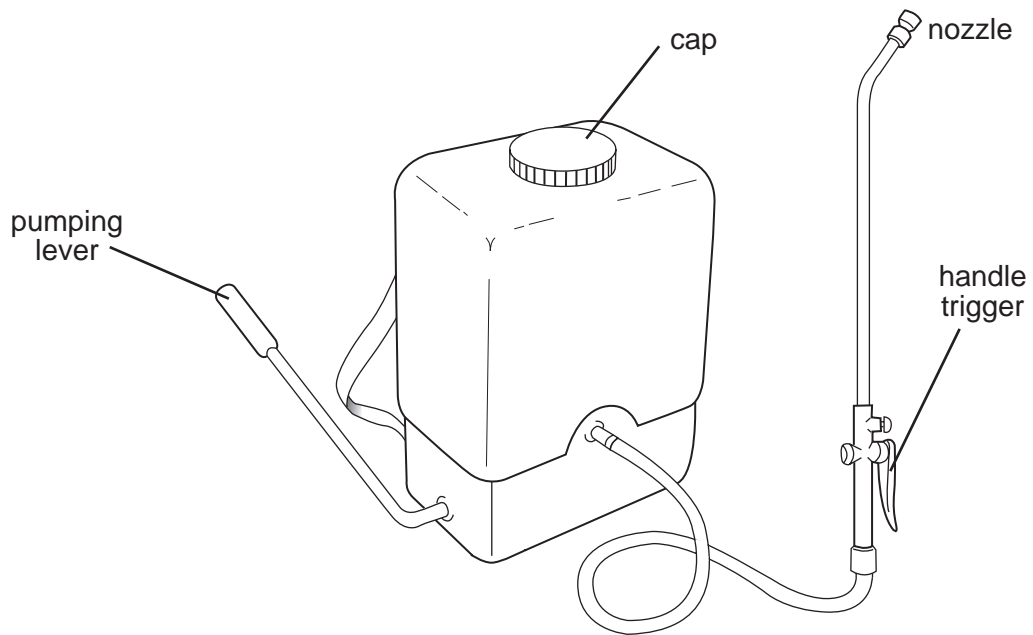


14

37 Which diagram shows a quick release knot?



38 The diagram shows a sprayer.



During use the spray ceases to flow from the nozzle.

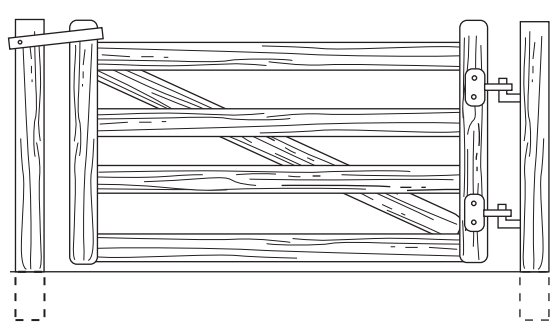
What should be the first action by the operator?

- A pump the lever
- B release the trigger
- C remove the nozzle
- D unscrew the cap

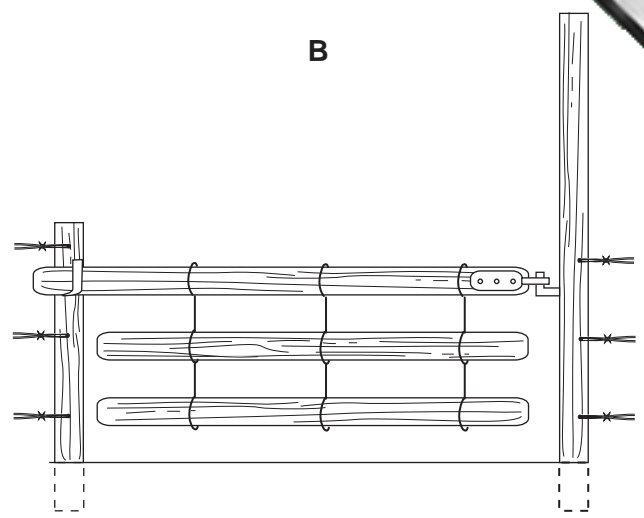
39 The diagram shows four gates.

Which gate is most easily opened and closed by one person?

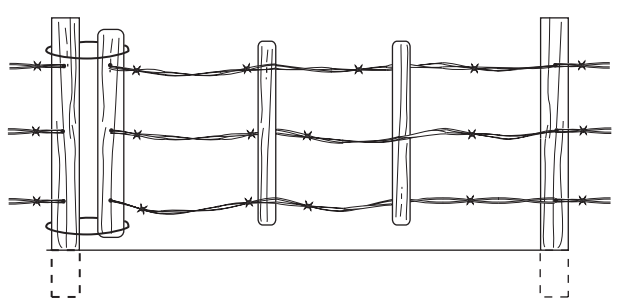
A



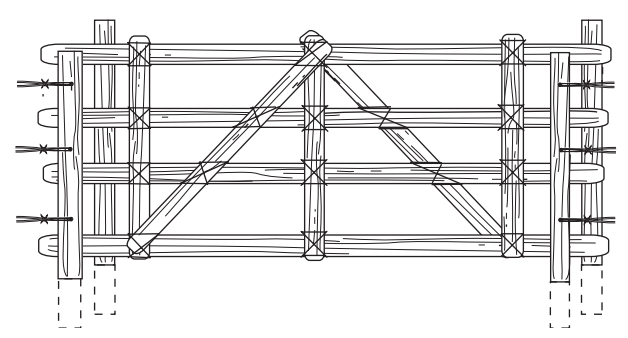
B



C

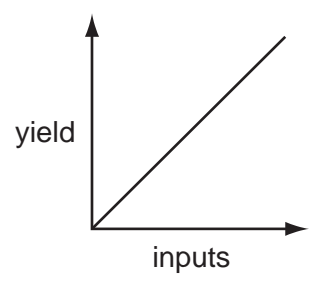


D

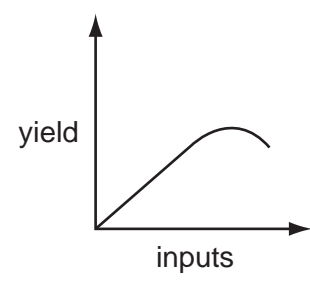


40 Which graph represents the 'law of diminishing returns'?

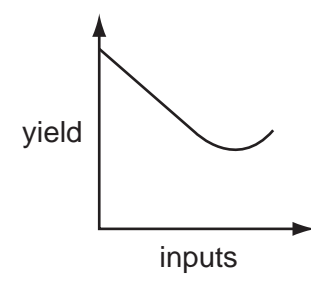
A



B



C



D

