

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

AGRICULTURE

0600/01

Paper 1 Multiple Choice

October/November 2006

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.

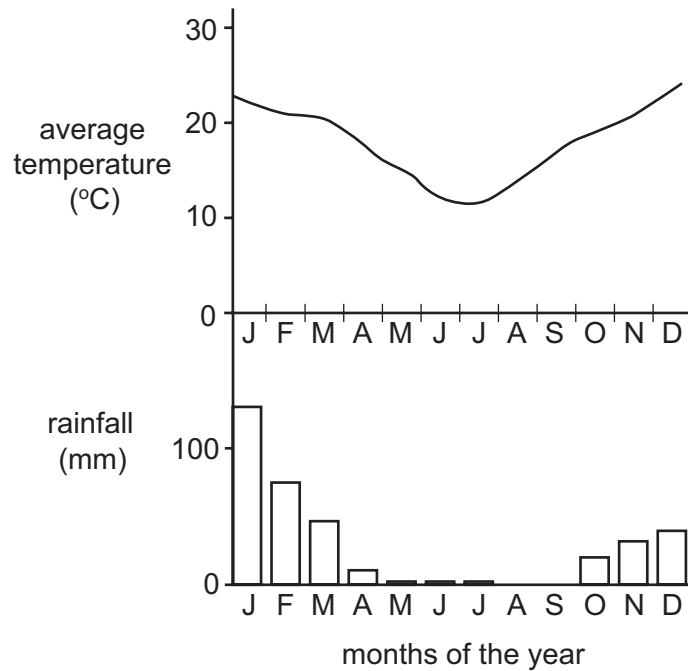
This document consists of **15** printed pages and **1** blank page.



1 What is the **direct** result of selling agricultural products to other countries?

- A foreign exchange
- B increased employment
- C supply of food
- D raw materials for industries

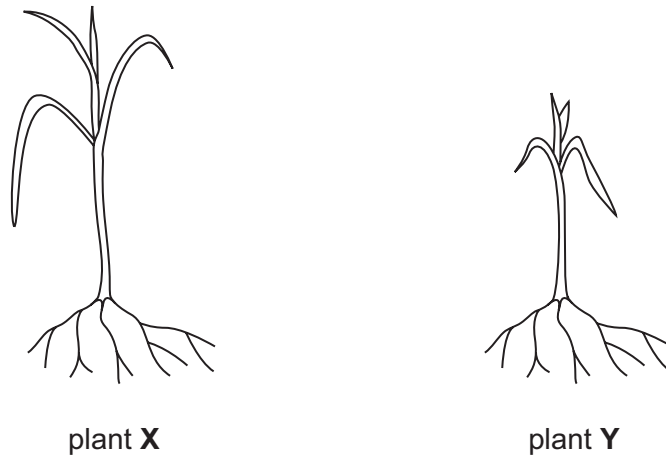
2 The graphs show the annual temperature range and rainfall distribution for an agricultural area.



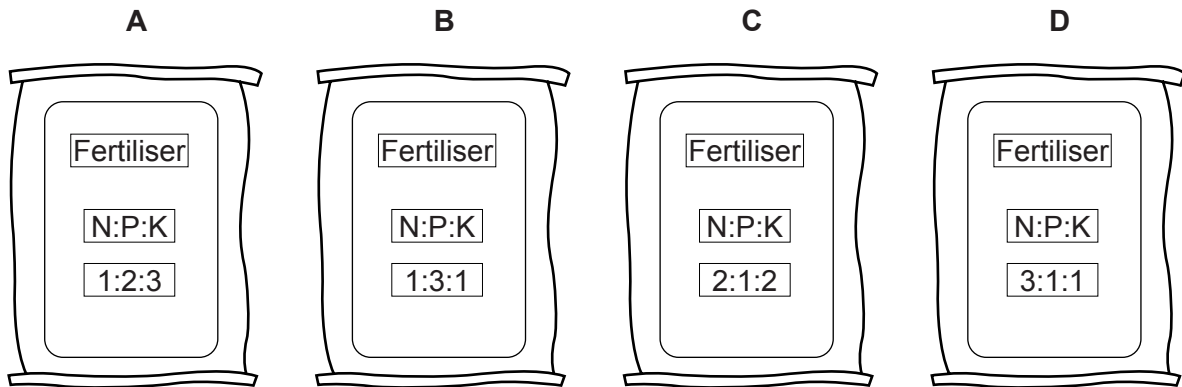
In which month is humidity at its highest?

- A January
- B April
- C June
- D November

- 3 The diagram shows two specimens of a cereal crop plant. Plant **Y** is lacking a nutrient.



Which fertiliser provides the highest proportion of the nutrient that **Y** needs?

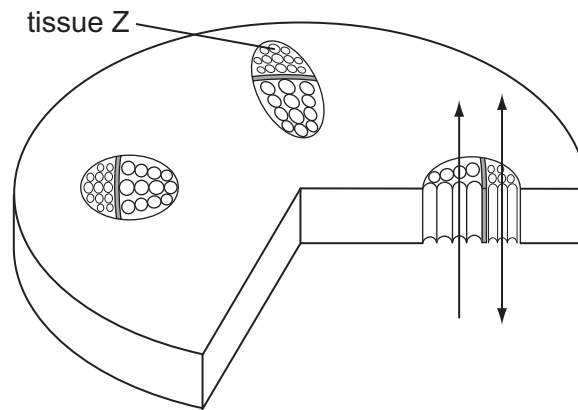


- 4 During dry weather, cracks are likely to appear in soils which contain a large proportion of
- A clay.
 - B humus.
 - C loam.
 - D sand.
- 5 What causes chemical weathering of rocks?
- A acid rain
 - B fast-flowing rivers
 - C freezing water in crevices
 - D wind-blown sand

6 Which process improves the air content of soil?

- A compaction
- B drainage
- C irrigation
- D mulching

7 The diagram shows the cross section of a plant stem.



What is carried by tissue Z (phloem)?

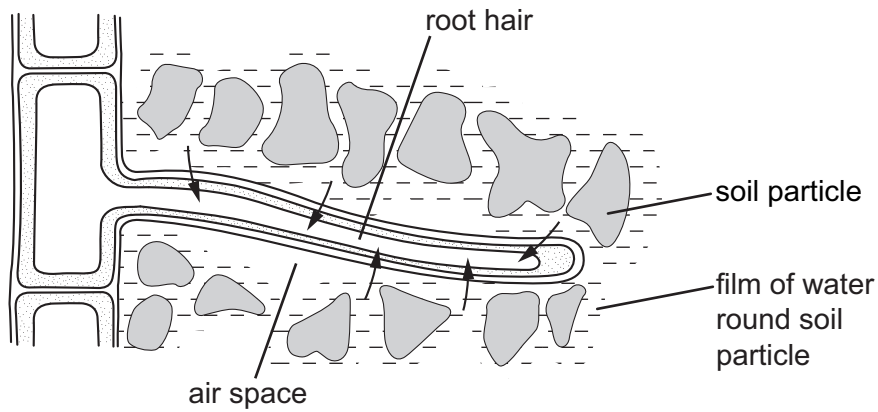
- A chlorophyll
- B mineral salts
- C starch
- D sugar

8 Irish potato tubers and sweet potato tubers are parts of plants modified for food storage.

Which description is correct?

	potato type	part of the plant modified	main type of stored food
A	Irish	root	protein
B	Irish	stem	starch
C	sweet	root	protein
D	sweet	stem	starch

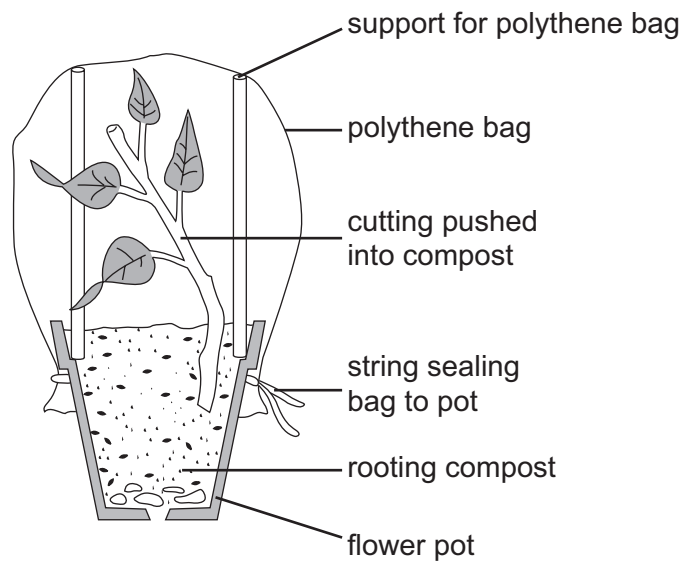
9 The diagram shows a root hair in soil.



By what process does oxygen move from the air space into the root hair?

- A diffusion
- B osmosis
- C respiration
- D transpiration

10 The diagram shows an experimental method of rooting a cutting of sweet potato.



Why is the cutting placed in a polythene bag?

- A to increase humidity around the cutting
- B to increase photosynthesis in the cutting
- C to increase respiration in the cutting
- D to increase transpiration from the cutting

11 When and where does respiration take place in plants?

	when	where
A	night and day	all cells
B	night and day	green cells only
C	night only	all cells
D	night only	green cells only

12 Why is it necessary to dry cereal grain before storage?

- A** it is less likely to be eaten by insects
- B** it is less likely to be attacked by fungi
- C** it is lighter to carry
- D** it takes up less space

13 A piece of uncultivated land is flat with a few scattered trees.

Which actions should be taken before cultivation?

- A** Cut trees close to the ground and plough out roots.
- B** Cut trees, leave stumps and plough around them.
- C** Cut trees, remove stumps and roots before ploughing.
- D** Leave the trees to provide shade for the growing crop.

14 A compound fertiliser is applied to the soil before sowing a cereal crop.

What is the best amount of fertiliser to be applied per hectare?

- A** 3 kg
- B** 30 kg
- C** 300 kg
- D** 3000 kg

15 What describes the biological control of a crop pest?

- A** introducing predators of the pest to the crop
- B** planting the crop when the pest is not present
- C** rotating the crop to break the life cycle of the pest
- D** spraying the crop with a natural pesticide

16 The table gives information about the action of three herbicides.

herbicide	type	use	action
X	selective	kills broad leaved weeds	before the crop emerges above the soil
Y	selective	kills broad leaved weeds	after crop emerges above the soil
Z	non-selective	kills broad leaved weeds and grasses	does not affect woody plants

Which combination of herbicides would be best for these situations?

	to clear weeds from around mature fruit trees	to clear weeds from an area where a maize crop has just been sown
A	X	Y
B	X	Z
C	Y	Z
D	Z	X

17 A cereal crop has been sprayed with a chemical insecticide.

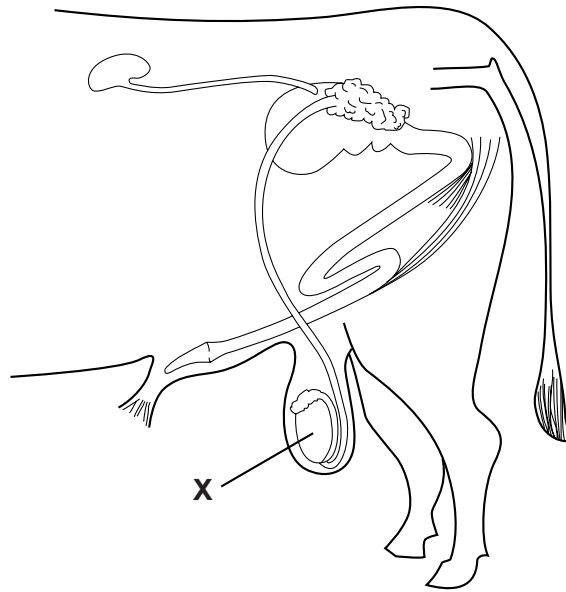
Why should it be left for two weeks before harvesting?

- A** Spraying slows the ripening of the grain.
- B** The insecticide is harmful if eaten.
- C** Time is needed for the dead insects to drop off.
- D** Time is needed for the insecticide to take effect.

18 What are the finger-like projections within the small intestine called?

- A** ducts
- B** glands
- C** hairs
- D** villi

19 The diagram shows the reproductive organs of a male mammal.



What is structure **X**?

- A bladder
- B epididymis
- C scrotum
- D testis

20 Why should a new-born calf be encouraged to suckle?

- A to increase the lactation period
- B to reduce the milk yield
- C to take in colostrum
- D to take in solids

21 What is a gestation period?

- A the length of time a seed remains dormant
- B the length of time from birth to sexual maturity
- C the length of time from conception to birth
- D the length of time of the oestrous cycle

22 Which of the following is seen in healthy ruminants?

- A clots in milk
- B rough coat
- C running eyes
- D straw-coloured urine

23 In farm livestock, what encourages the spread of disease but does not cause disease?

- A bacteria
- B iron deficiency
- C overcrowding
- D viruses

24 Which food material is most suitable to supply protein in poultry rations?

- A bean meal
- B fresh grass
- C oyster shell
- D sliced roots

25 Livestock are often provided with mineral licks as part of a balanced diet.

Which substance is provided by a mineral lick?

- A carbohydrate
- B fat
- C salt
- D vitamin A

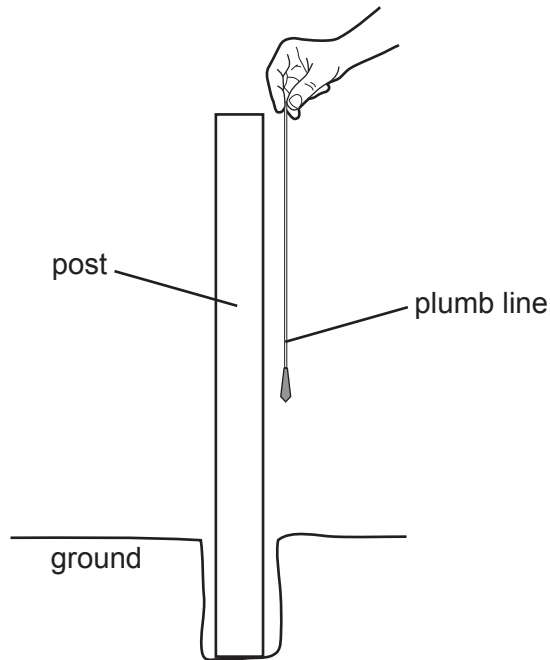
26 The main parts of an animal ration are barley meal, groundnut cake and fishmeal.

If barley meal is not available, what is the best substitute?

- A bean meal
- B millet
- C silage
- D wheat meal

- 27 Which statement is correct?
- A Alleles are found on genes.
 - B Chromosomes are found on genes.
 - C Genes are found on alleles.
 - D Genes are found on chromosomes.
- 28 Which breeding practice, if repeated, will lead to a reduction of fat in animals grown for meat?
- A breeding animals in intensive conditions
 - B breeding from animals fed on a low fat diet
 - C breeding only from pedigree animals
 - D breeding selectively from lean animals
- 29 Which plants are grazed, rich in protein and help maintain soil fertility?
- A annual grasses
 - B bushes
 - C legumes
 - D perennial grasses
- 30 What is a feature of a rotational grazing system?
- A low stocking rate
 - B fewer parasites
 - C selective grazing
 - D serious risk of erosion

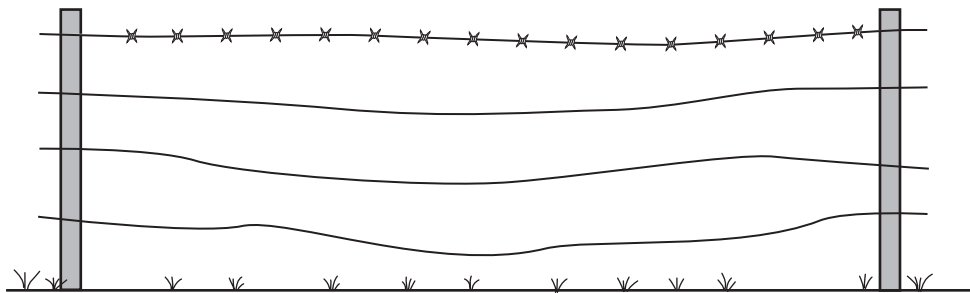
31 When a post and wire fence is built, a plumb line (weight on a string) may be used.



What is the reason for using the plumb line?

- A to check the height of the post
- B to check that the post is upright
- C to line up the position of the next post
- D to mark the position of the wires

32 The diagram shows the result of spacing fencing posts too far apart.

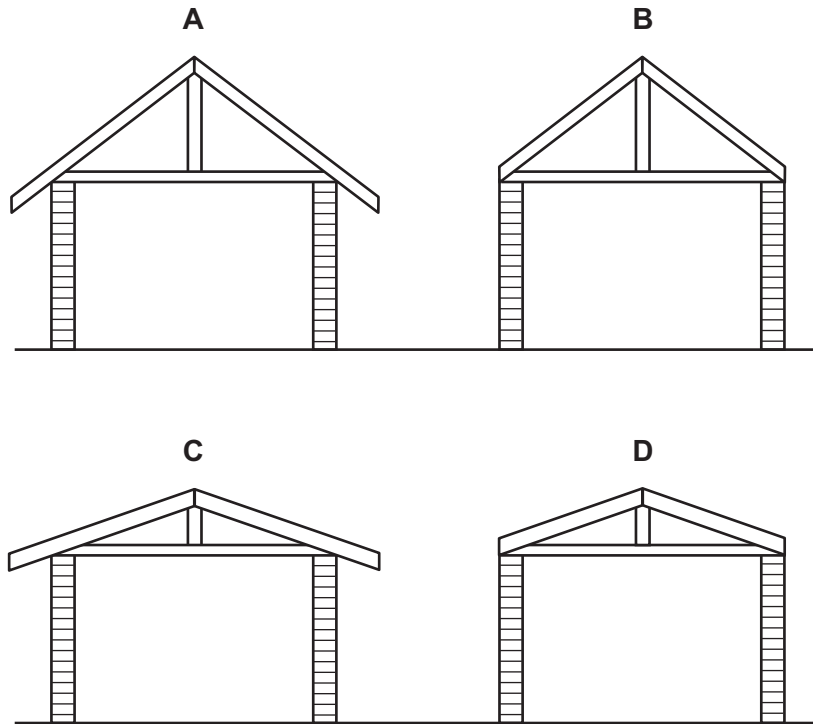


How may the problem of sagging wires be avoided?

- A use braces on each post
- B use droppers between the posts
- C use more strands of wire
- D use only barbed wire

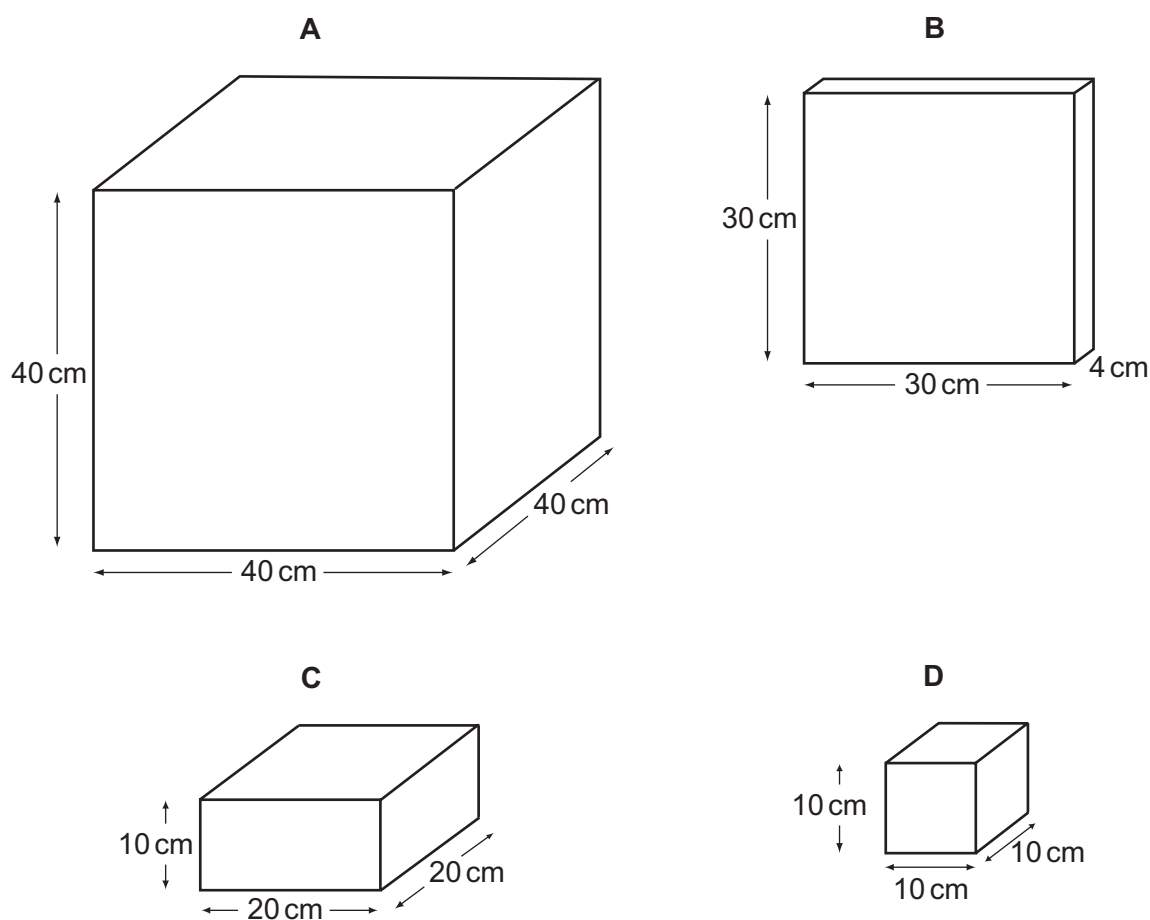
33 The diagrams show roof trusses in position on the walls of a new building.

Which truss is correct for a thatched roof?

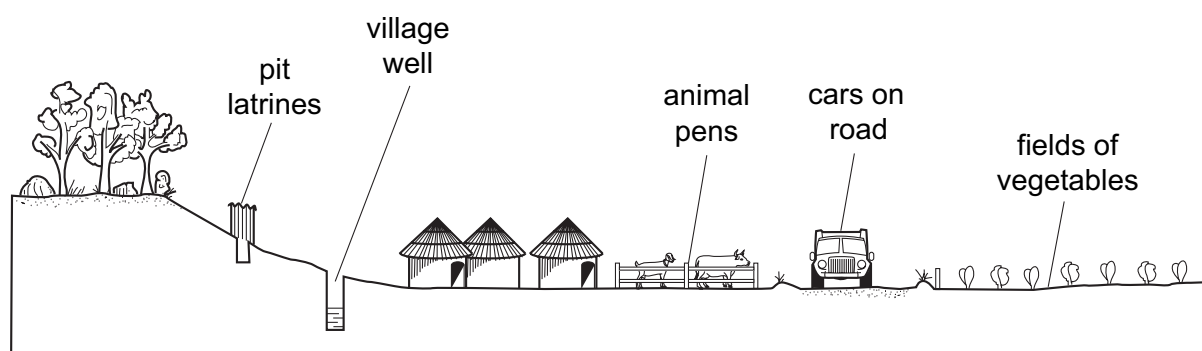


- 34 Earth bricks need to dry out without weakening their structure and be of suitable dimensions for wall building.

Which shape best suits these purposes?



- 35 The diagram shows the location of a village well which has become contaminated.

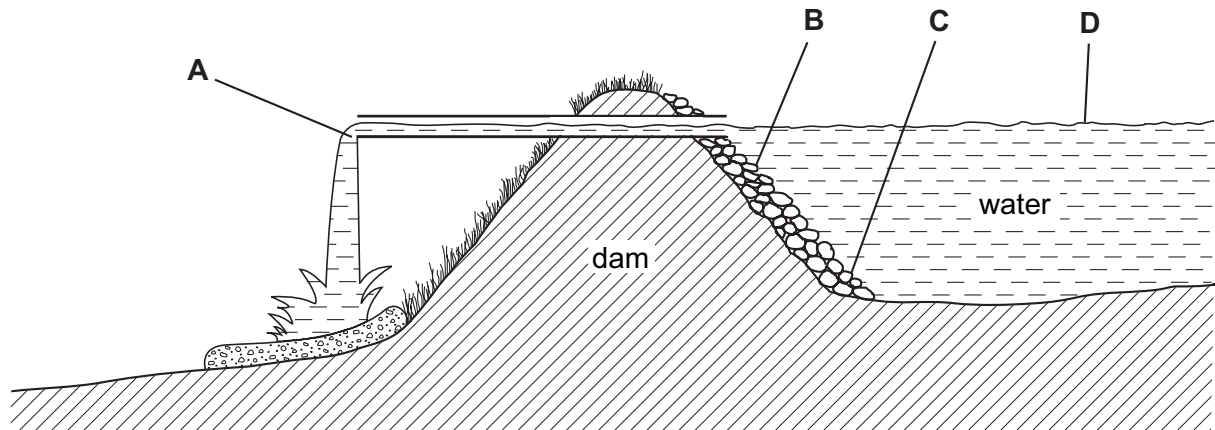


What is the most likely source of pollution?

- A animal waste
- B exhaust fumes from cars
- C insecticide sprayed on the fields
- D seepage from the pit latrines

36 The diagram shows a farm dam.

At which point is the water pressure greatest?

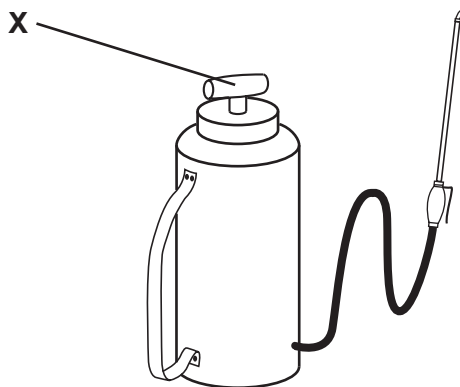


37 Overtightening a nut will damage the thread of a bolt.

Which tool is most likely to cause this?

- A a long screwdriver
- B a long spanner
- C a short screwdriver
- D a short spanner

38 The diagram shows a sprayer used to spray plants with insecticide.

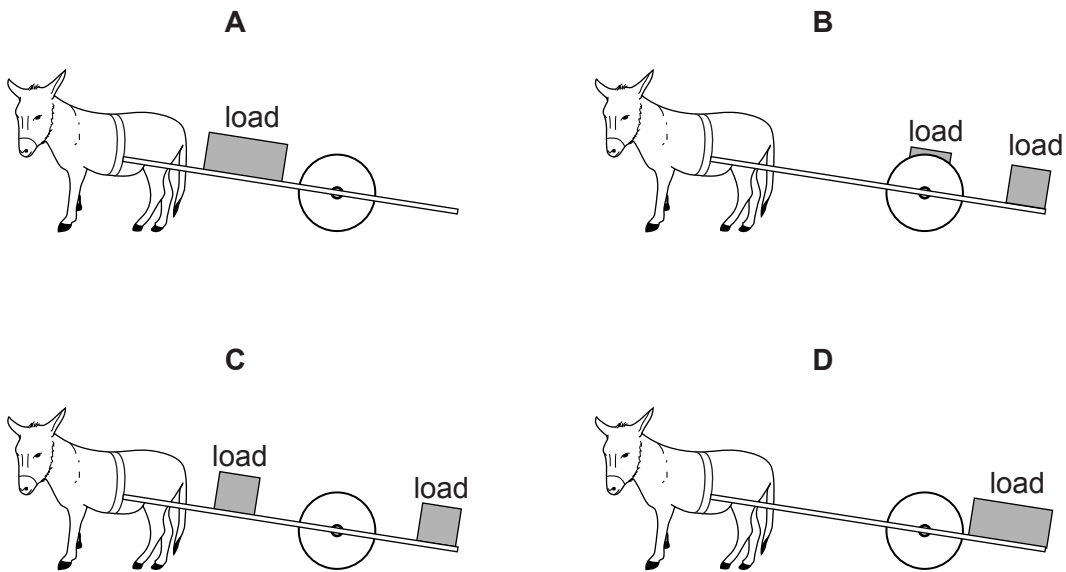


What happens when the handle **X** is moved up and down?

- A The insecticide is mixed with water.
- B The pressure builds up in the tank.
- C The nozzle opens so spray can come out.
- D The size of the droplets in the spray is controlled.

39 The diagrams show carts carrying the same load. The loads are placed in different positions on the cart.

Which load is easiest for the donkey to pull?



40 The table shows part of a record kept for a maize crop in 2006.

date planted:
seed rate:
spacing:
date harvested:
yield:

When completed, what information will this record provide?

- A amount of maize harvested
- B amount of insecticide applied
- C cost of the seed
- D profit made in 2006

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