



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

AGRICULTURE

0600/01

Paper 1 Multiple Choice

October/November 2008

45 minutes

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

* 3 4 6 0 8 8 5 3 2 8 *

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.

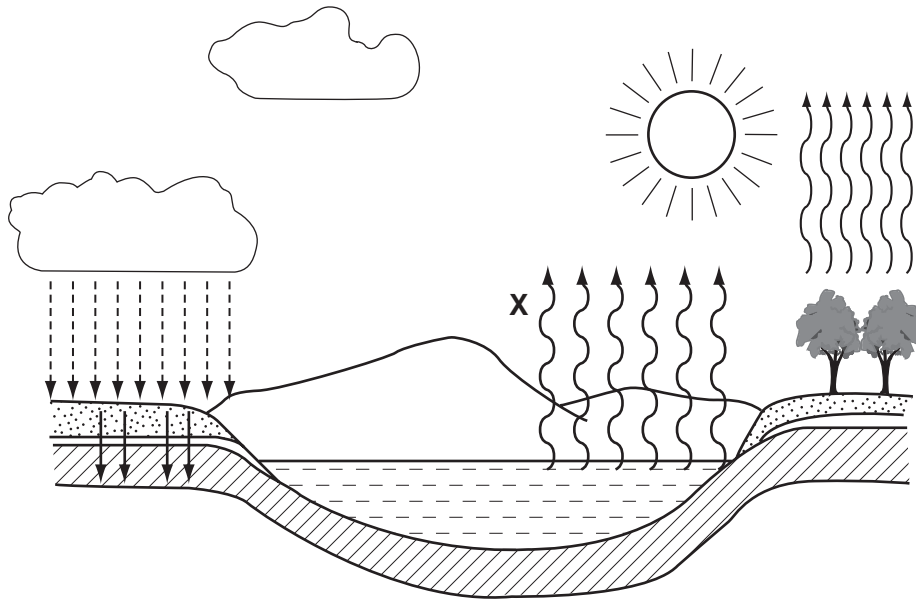
Read the instructions on the Answer Sheet very carefully.

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 **16** printed pages.



1 The diagram shows the water cycle.



What is the name given to process X?

- A condensation
- B evaporation
- C percolation
- D precipitation

2 A farmer has a large piece of land on which he grows wheat year after year.

What is the name for this type of agriculture?

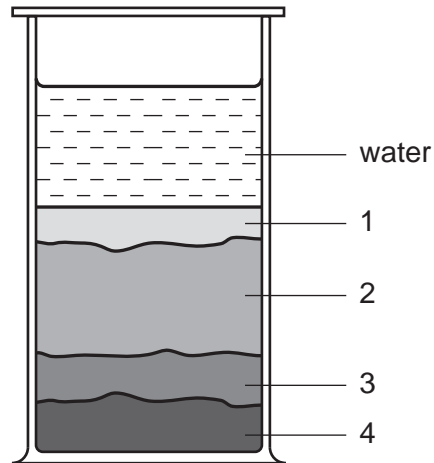
- A crop rotation
- B mixed farming
- C monoculture
- D organic farming

3 In which form is nitrogen usually absorbed by plants?

- A as ammonia gas
- B as ammonium ions
- C as nitrate ions
- D as nitrite ions

3

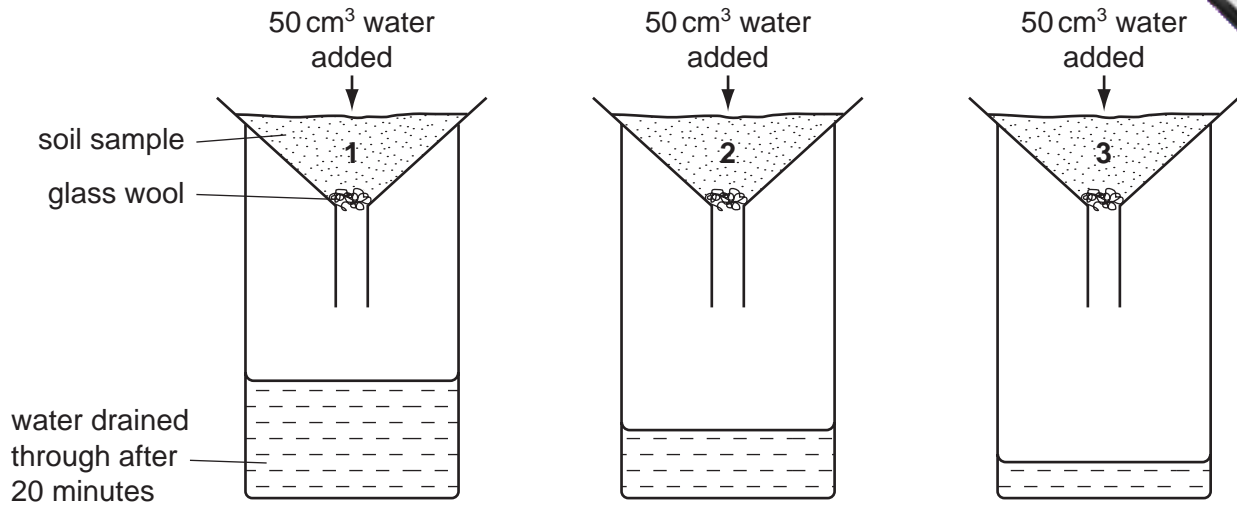
- 4 The diagram shows a sample of soil which has been shaken with water and allowed to settle overnight.



What are the numbered layers likely to be?

	1	2	3	4
A	clay	gravel	sand	silt
B	clay	silt	sand	gravel
C	sand	clay	gravel	silt
D	sand	clay	silt	gravel

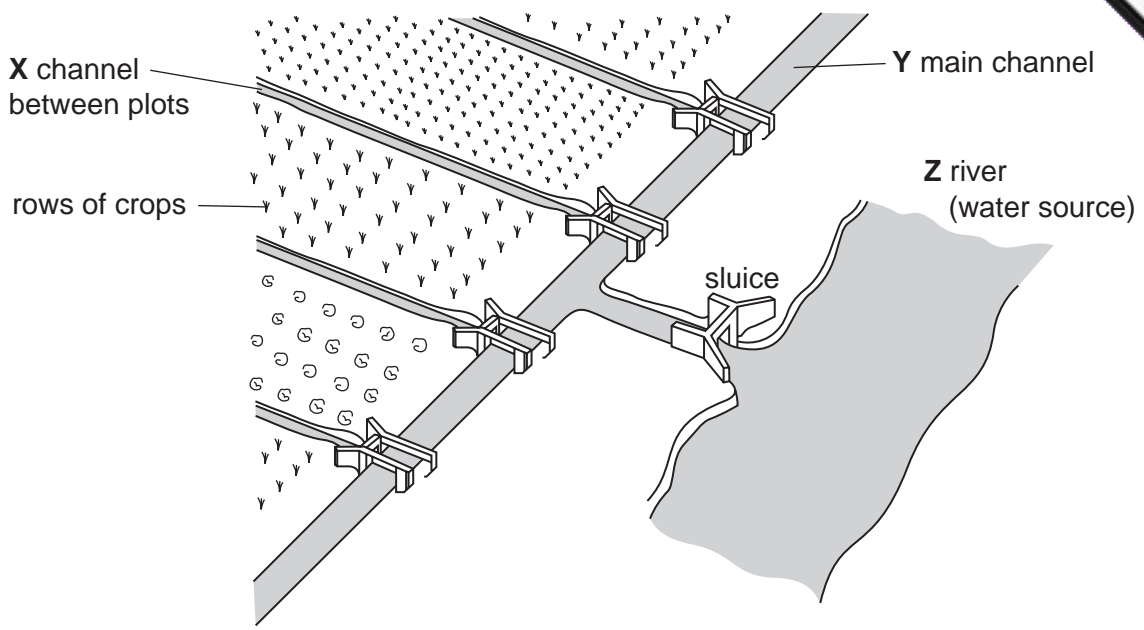
- 5 The diagrams show the results of an experiment in which 50 cm³ of water was poured into three samples of three different soils labelled 1, 2 and 3.



What were the soil samples?

	1	2	3
A	clay	sand	humus-rich soil
B	humus-rich soil	sand	clay
C	sand	clay	humus-rich soil
D	sand	humus-rich soil	clay

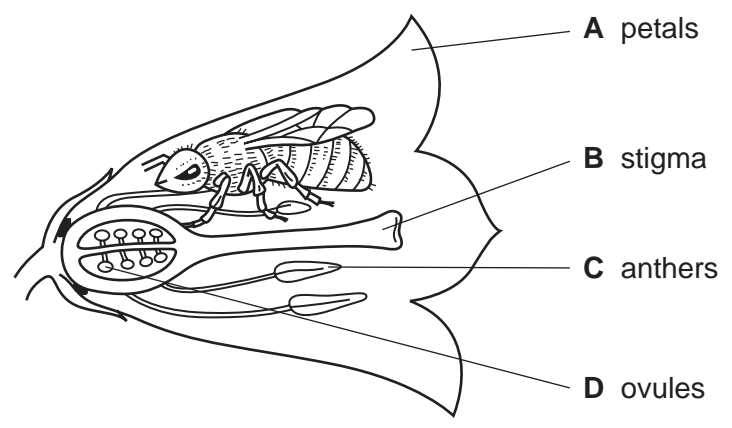
6 The diagram shows furrow irrigation.



What are the required water levels for effective irrigation?

- A X, Y, and Z at the same level
- B X lower than Y, Z lower than Y
- C Y higher than X, Y and Z at the same level
- D Y higher than X, Z higher than Y

7 What attracts the bee to the flower?



8 Water diffuses across a partially permeable membrane.

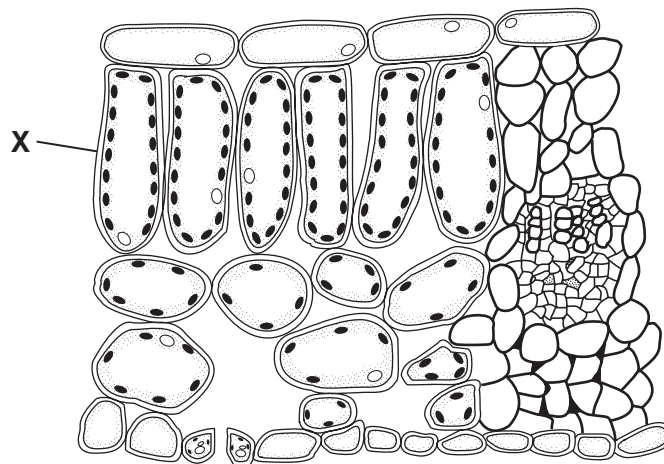
What is this process called?

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

9 By which process do mineral salts usually move from the soil into the root?

- A active transport
- B diffusion
- C osmosis
- D translocation

10 The diagram shows a section through a leaf.



What is the main function of cell X?

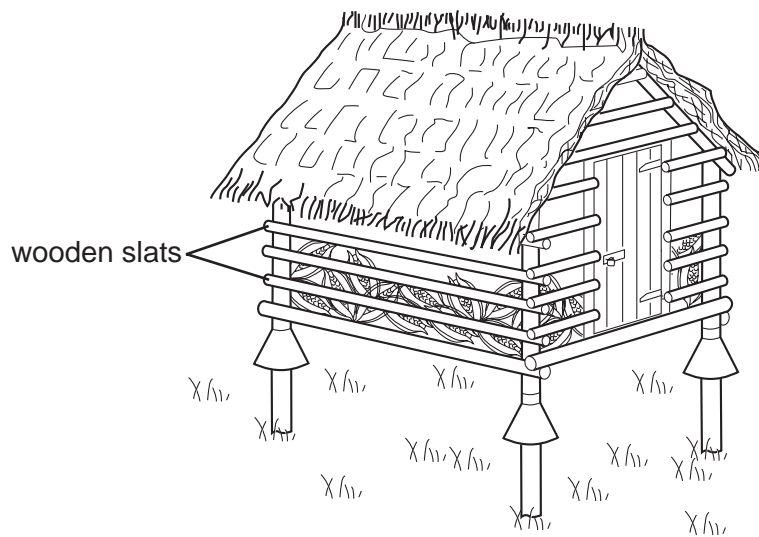
- A gas exchange
- B photosynthesis
- C preventing water loss
- D translocation

11 A young tree is planted in a hot, dry climate.

What will reduce transpiration?

- A adding fertiliser to the soil
- B making a hollow for watering
- C placing organic matter around the tree
- D removing some of the leafy shoots

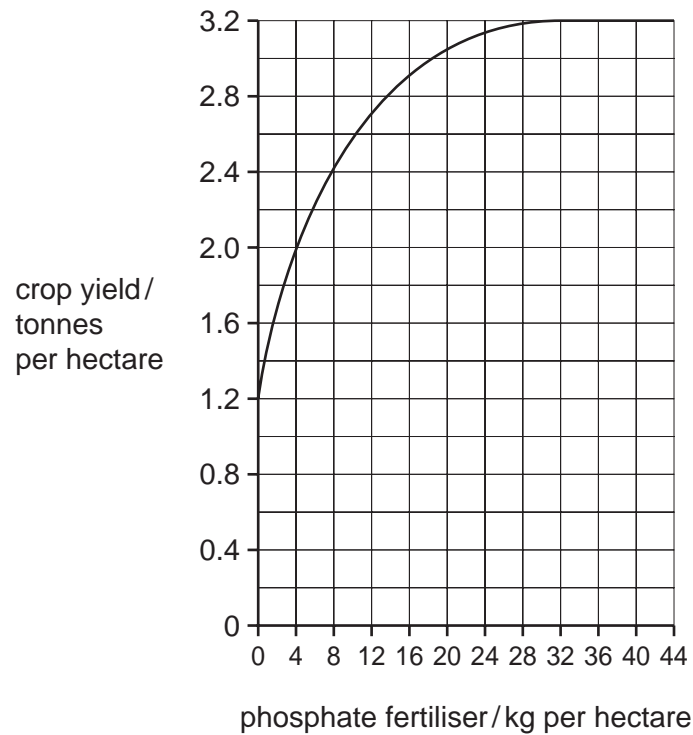
12 The diagram shows a storage building for a cereal crop.



Why are the sides slatted, and **not** solid?

- A to discourage theft
 - B to keep rats out
 - C to keep the air moist
 - D to provide ventilation
- 13 What best controls sap-sucking pests on a cereal crop?
- A contact fungicides
 - B contact insecticides
 - C systemic fungicides
 - D systemic insecticides

14 The graph shows the effect of phosphate fertiliser on the yield of cereal.



Which is the **least** amount of fertiliser that can be applied to give maximum yield?

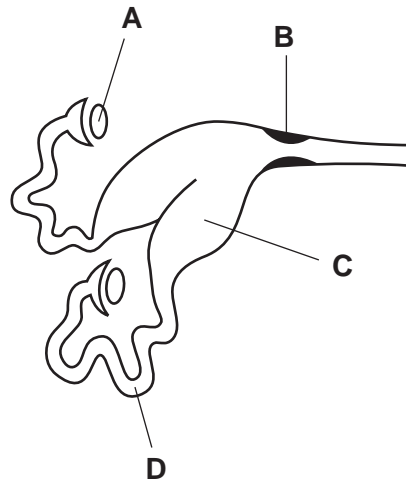
- A 0 kg per hectare
 - B 3.2 kg per hectare
 - C 32 kg per hectare
 - D 44 kg per hectare
- 15 What causes 'wilt' of tomatoes, 'blight' of cotton and 'blight' of soya bean?
- A bacteria
 - B insects
 - C nematodes (eelworm)
 - D viruses
- 16 How are virus diseases of plants commonly spread?
- A by aphids, mealy bugs and scale insects
 - B by bollworms, stalk borers and weevils
 - C by grasshoppers and locusts
 - D by rats and mice

17 Which weather conditions are most likely to encourage fungal disease in a crop?

- A cool, dry and calm
- B warm, dry and windy
- C cool, wet and windy
- D warm, wet and calm

18 The diagram shows the internal reproductive organs of a female farm animal.

Where is the ovum fertilised by a sperm?

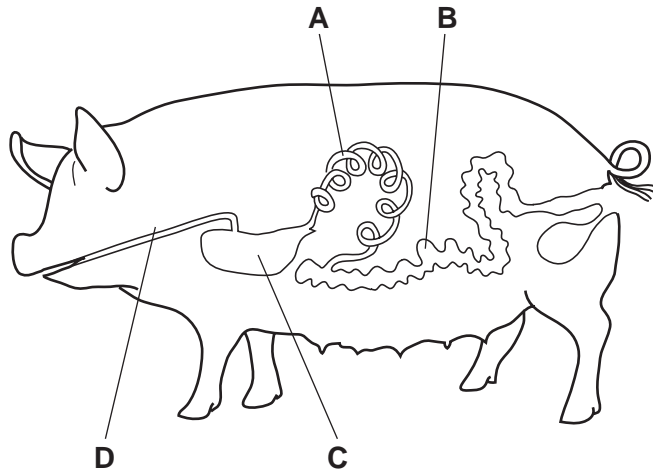


19 Which structures absorb the products of digestion?

- A ducts
- B glands
- C ureters
- D villi

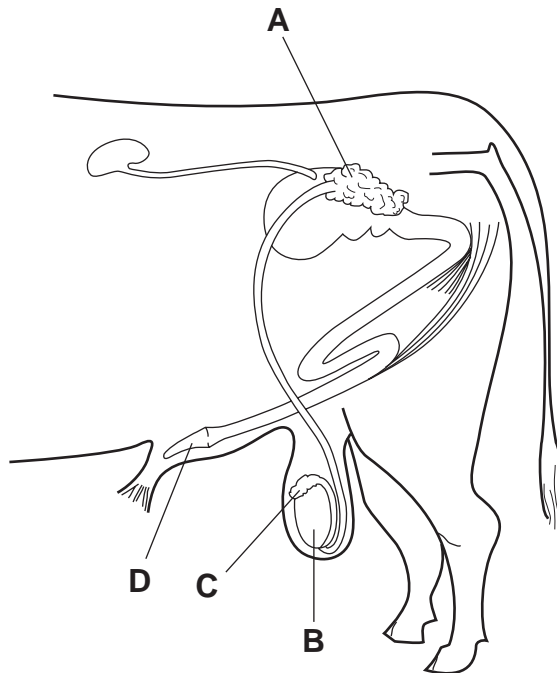
20 The pig is a non-ruminant.

In which part of a pig's digestive system is gastric juice produced?



21 The diagram shows the reproductive system of a male farm animal.

Where is the male hormone, testosterone, produced?



22 What is required by livestock to prevent a blood disorder (anaemia)?

- A calcium
- B copper
- C iron
- D magnesium

- 23 What is the normal temperature of a healthy adult **ruminant**?
- A 36°C B 39°C C 42°C D 45°C
- 24 Which part of a non-ruminant's diet will provide the most energy?
- A carbohydrate
B minerals
C protein
D water
- 25 Maintenance rations supply an adult animal's requirements for
- A egg production.
B general good health.
C rapid growth.
D milk production.
- 26 What provides a high level of protein for pigs and poultry?
- A bean meal
B cereal grain
C fresh grass
D potato tubers
- 27 Which genetic term describes a goat with the alleles Yy?
- A dominant
B recessive
C heterozygous
D homozygous
- 28 Cuttings are taken from a plant of genotype Zz.
What will be the genotype of the new plants?
- A zz B Zz C ZZ D ZZZZ

29 What will be the effect of overgrazing grassland?

- A increased number of bushes
- B increased soil erosion
- C increased soil fertility
- D increased variety of plants

30 The table shows the numbers of animals kept in a paddock.

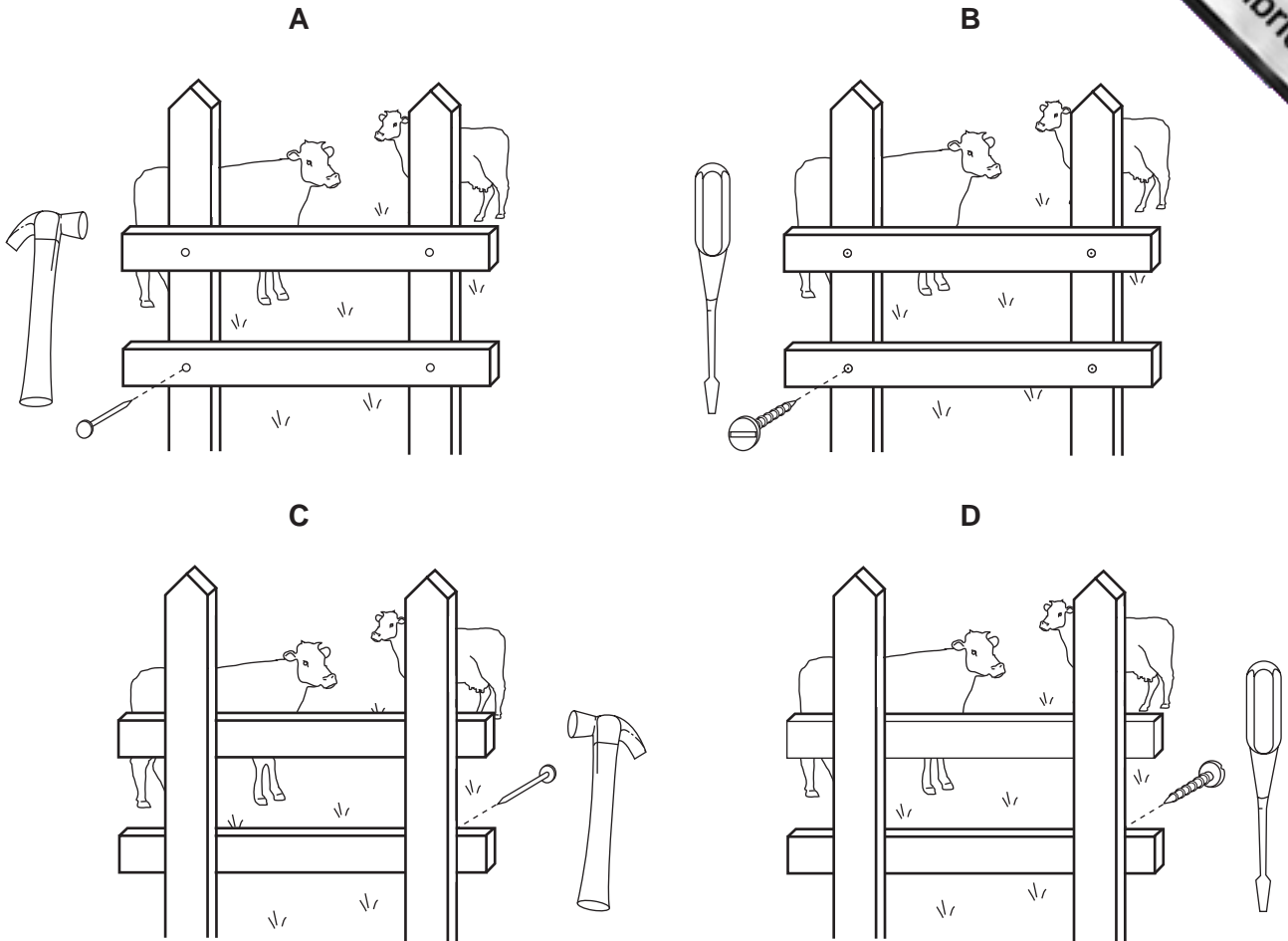
Which paddock shows the **highest** stocking rate?

paddock	size of paddock (hectares)	number of animals
A	2	10
B	3	18
C	4	16
D	5	25

31 What is a **disadvantage** of a living fence (hedge) compared with a wooden fence?

- A It acts as a wind-break.
- B It deters predators.
- C It is eaten by animals.
- D It prevents erosion.

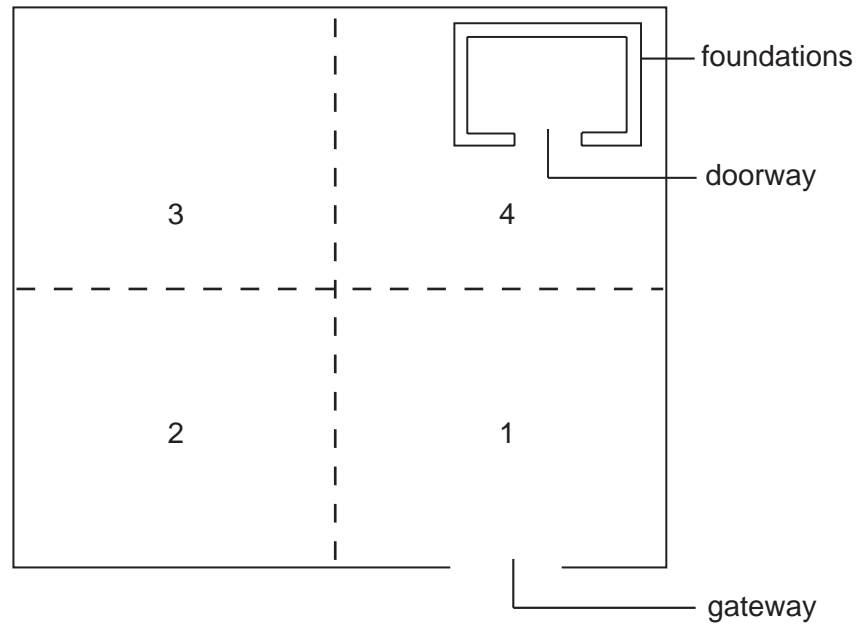
32 Which method of fence construction should be used to contain cattle within an enclosure?



33 What is required for a strong roof truss?

- A a triangular construction
- B a wooden frame
- C a height greater than width
- D a width greater than height

34 The diagram shows an enclosure and foundations for a livestock house.



The surface of the enclosure is to be covered with concrete.

In which order should the four areas of concrete be laid?

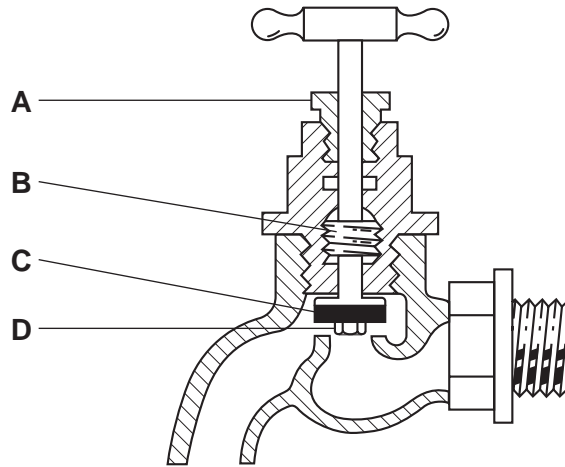
	start						finish						
A	1	→	2	→	3	→	4						
B	1	→	4	→	3	→	2						
C	3	→	4	→	1	→	2						
D	4	→	3	→	2	→	1						

35 What is the main advantage of providing water in a trough for cattle, rather than allowing them to drink from a pond?

- A** better hygiene possible
- B** less labour required
- C** less water required
- D** lower stocking rate needed

36 The diagram shows a water tap.

Which part should be replaced to stop the tap dripping?

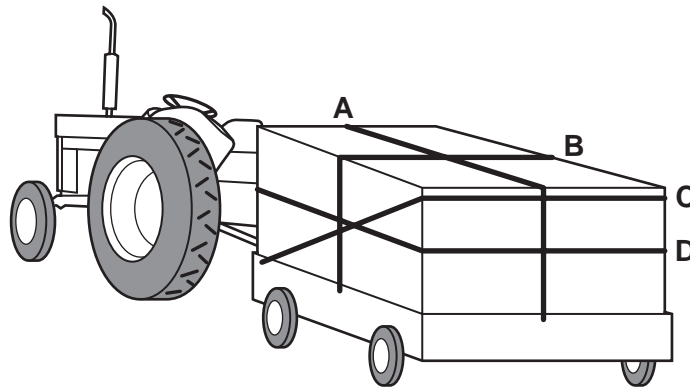


37 What is the best way to preserve the metal parts of a tool?

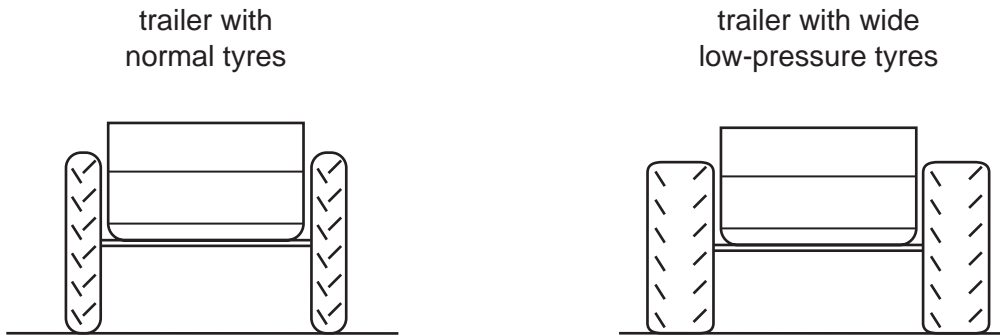
- A Coat them with grease.
- B Cover them with a cloth.
- C Dip them in water.
- D Spray them with creosote.

38 The diagram shows a tractor pulling a trailer.

Which rope takes the most strain when going down hill?



39 The diagram shows the rear end of two trailers used on the farm.



What is the advantage of using wide, low-pressure tyres?

- A They reduce damage to soft ground.
 - B They reduce the number of punctures.
 - C They reduce trailer wobble.
 - D They reduce the wear to tyres.
- 40 What happens to the price of goods if their supply increases but the demand remains the same?
- A The price will drop.
 - B The price will remain stable.
 - C The price will rise quickly.
 - D The price will rise slowly.