

MINISTRY OF EDUCATION AND HIGHER EDUCATION

FORM FOUR EXAMS, 2011

AGRICULTURE



P/LAND NATIONAL EXAMINATION BOARD

Name

School

Roll Number.....

Puntland State of Somalia

Ministry of Education

Puntland National Examination Board

Form 4

AGRICULTURE EXAMINATION

June 2011

Time 2 hours

Plus 10 minutes before the exam for reading through the paper

TOTAL TIME 2 hours 10 minutes

INSTRUCTIONS TO CANDIDATES

This paper consists of 17 printed pages.

Count them now. Inform the invigilator if there are any missing.

PART ONE	(10 Multiple choice questions):	10 marks
PART TWO	(10 Structured questions):	90 marks
	TOTAL	100 marks

Answer ALL questions in section 1 and 2.

Rough work can be done on page 2 and 3. This will not be marked

No extra paper is allowed.

If you make a mistake cross out the incorrect answer clearly and write your correct answer.



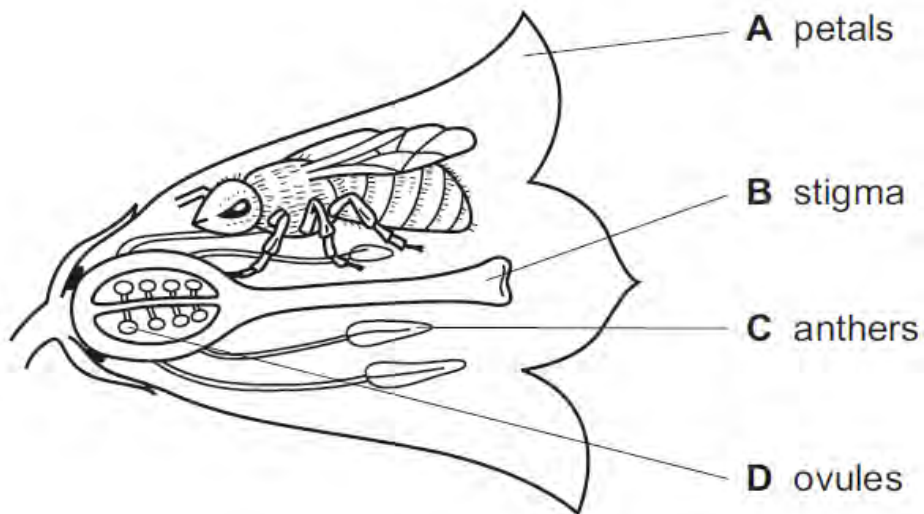
4. The following are some of the reasons why fish farming is becoming an important economic activity in Puntland

- A. As a source of food
- B. As a source of income
- C. As a research tool
- D. As a foreign exchange

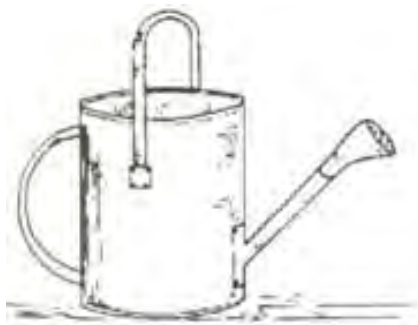
5. By which process do mineral salts usually move from the soil into the root?

- A. Active transport
- B. Diffusion
- C. Osmosis
- D. Translocation

6. What attracts the bee to the flower?



7. The diagram below is one of the farm tools. It is used for?



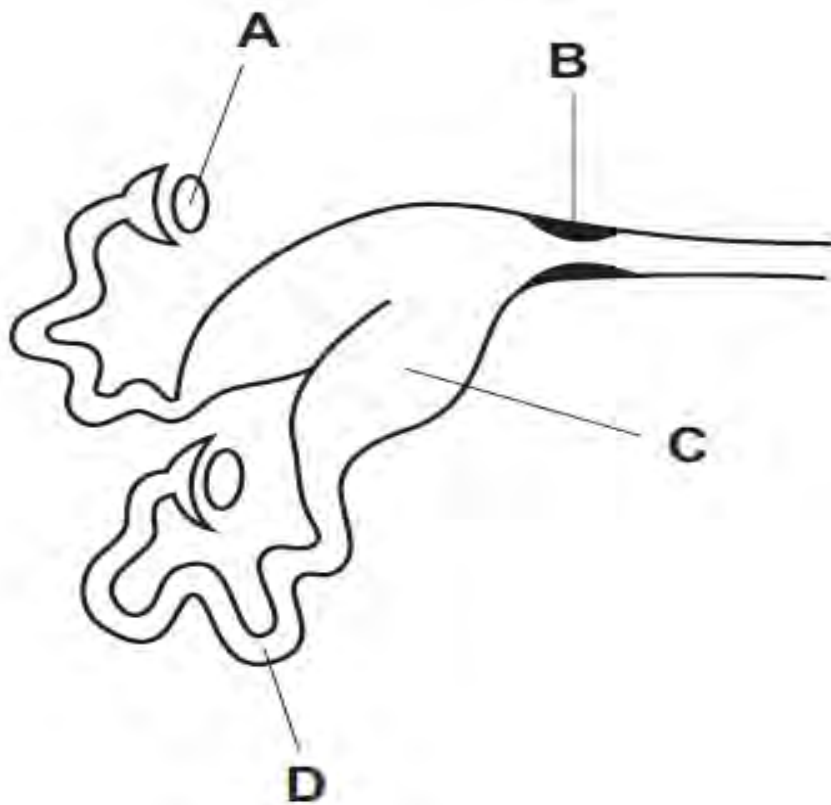
- A. Transporting water from the source
- B. Watering animals
- C. Watering young seedlings in the nursery
- D. Watering trees in the farm



8. 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

9. The diagram shows the internal reproductive organs of a female farm animal. Where is the ovum fertilised by a sperm?



10. 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



Part 2: Structured Questions. Answer ALL Questions. 90 marks

QUESTION ONE (10 marks)

- a) Diagrams A, B and C below illustrate some farm tools and equipment. Give the name and one function of each tool in the farm. [6 marks]



Name

Function.....

.....

.....



Name

Function.....

.....

.....



Name

Function.....

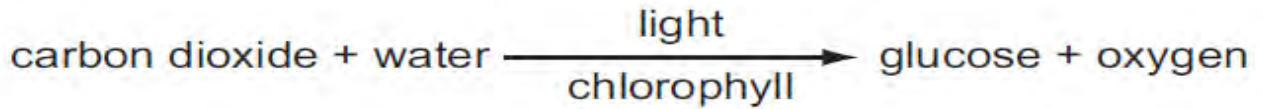
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- b) Using lines, match the following terms with the definitions [4marks]

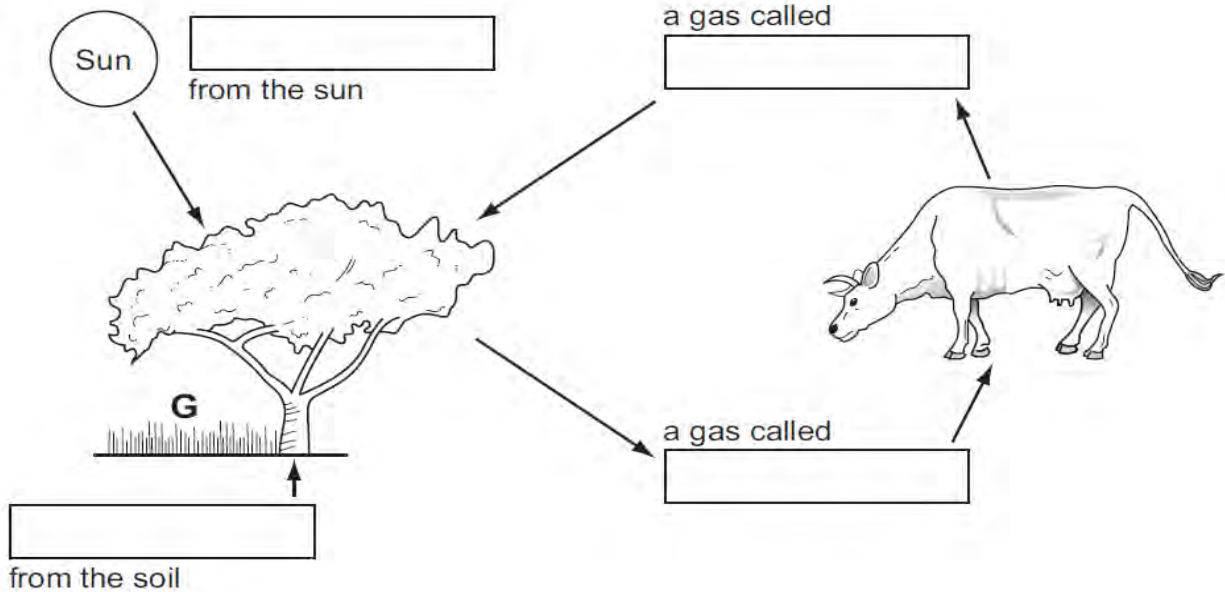
Terms	Definition
1. Pathogens	a. Are living organisms that kill and feed on other living organisms
2. Pests	b. Are agents that move pollen from the anther of a flower to the stigma of another
3. Predators	c. Are micro organisms such as bacteria and viruses that can cause diseases
4. Pollinators	d. Are living organisms found in areas they are unwanted

QUESTION TWO (9 marks)

(a) The word equation for photosynthesis is as follows.



Complete the boxes in the figure below using only words from this equation. [4 marks]



(b) Cereals are grown in a garden plot, G, under the tree. Explain how the tree might affect:

(i) photosynthesis in the cereal plants;

.....
.....

(ii) transpiration in the cereal plants.

.....
.....[2 marks]

(c) Name a pest of a cereal crop and describe how it can be controlled.

Name of cereal crop

Name of pest

Method of control

.....
.....

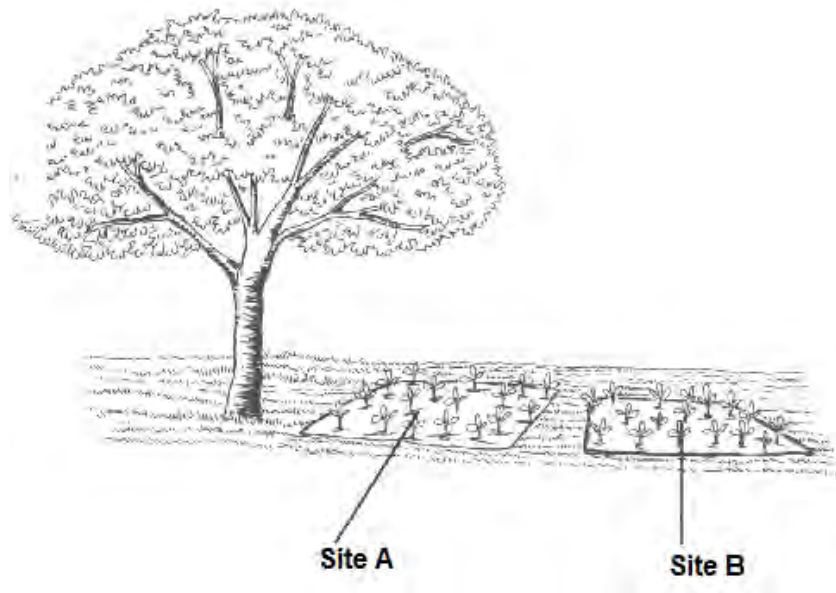
[3 marks]

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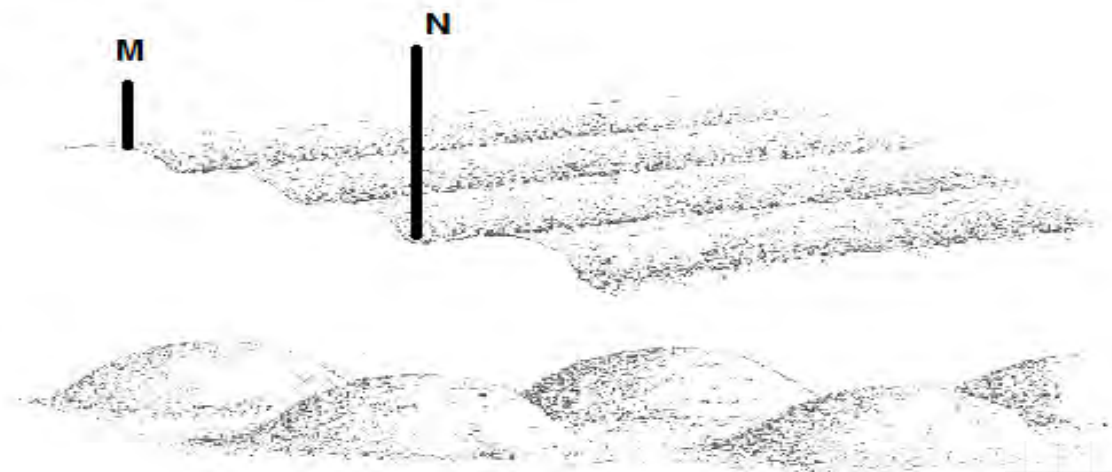


QUESTION THREE (12 Marks)

Study the figure below then answer the questions that follow.



- a) Which of the two sites, A and B is most suitable for a nursery bed?
 - i) [1 mark]
 - ii) Give a reason for your answer in (i) above.
..... [1 mark]
- b) List two main operations involved in seedbed preparation [2 marks]
 - i)
 - ii)
- c) Study the diagram below then answer the questions that follow.



i) Name the two parts of the ridges M and N [2 marks]

.....
.....

ii) Give two advantages of ridging [2marks]

.....
.....

iii) Name one crop grown on mounds [1 mark]

.....

d) Study the diagram below then answer the questions that follow.



i) Name the season in which each of the crops shown above is being grown. [1 mark]

.....

ii). Why is the seedbed in diagram P raised? [1 mark]

.....

iii). Why is the seedbed in diagram Q sunken? [1 mark]

.....

QUESTION FOUR (9 marks)

a) The figure below shows three safety signs found on herbicide containers in Galkayo.



1



2



3

State what each of these signs means.

- 1)
- 2)
- 3)

[3marks]

(b) Explain why weeds should not be sprayed with herbicide:

(i) just before rain;

.....
.....

(ii) in windy weather.

.....
.....[2 marks]



(c) Name a local weed and explain how it spreads in a crop or pasture.

Weed.....

Spread.....

.....[2 marks]

(d) Describe the pattern of pesticide use that is most likely to lead to a pesticide resistance problem.

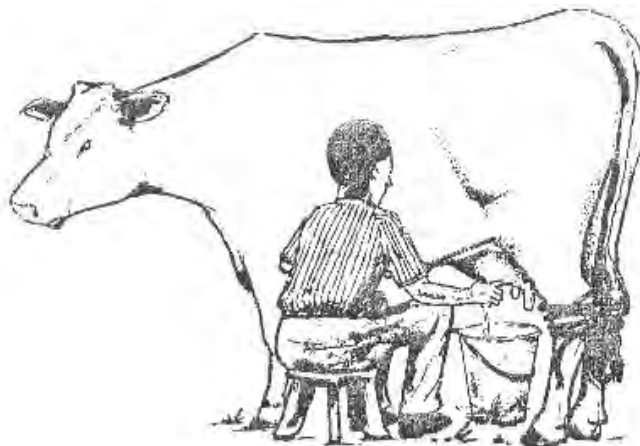
.....

.....

.....[2 marks]

QUESTION FIVE (8 Marks)

a) Below is an illustration of a farm operation. Study it carefully and answer the questions that follow.



i) What activity is being carried out?

..... [1 mark]

ii) Give three activities carried out on the animal before the above operation.

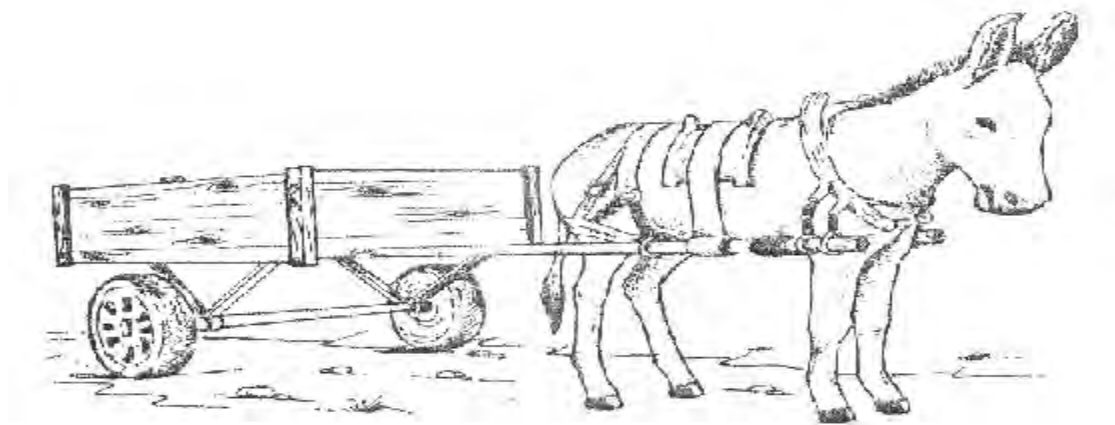
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.....

.....[3 marks]



b). The diagram shows a donkey pulling a farm implement.



i) Name the implement being drawn by the donkey. [1 mark]

.....

ii) State three maintenance practices carried out on the implement. [3 marks]

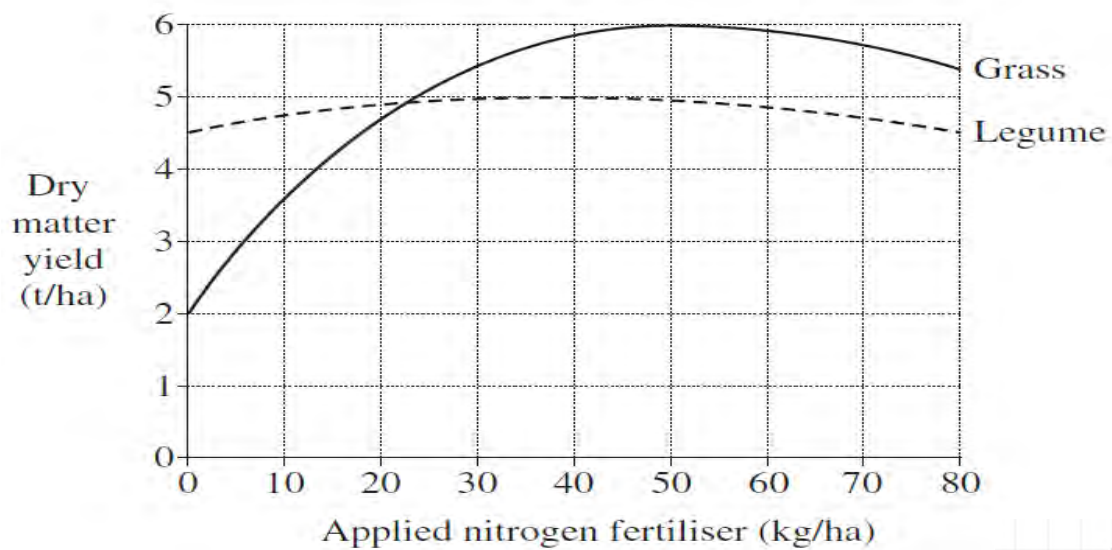
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QUESTION SIX (6 marks)

a) The graph shows the response of dry matter yield to applied nitrogen fertiliser for a grass/legume pasture trial.



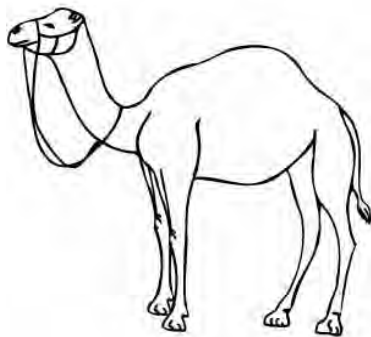
(i) What rate of applied nitrogen fertiliser gave the maximum dry matter yield for grasses?
.....[2 mark].

(ii) Explain why grasses and legumes responded differently to the application of nitrogen fertiliser.....
.....
..... [2 marks]

b) Explain how the overuse of fertiliser affects the environment.
.....
.....
.....[2 marks]

QUESTION SEVEN (10 Marks)

a) [3 marks]



- i. The illustration shows an animal found in Puntland. Give the name of this animal.....
- ii. Name a food that is obtained directly from the animal.
.....
- iii. Name a product, other than food, that is obtained directly from the above animal.
.....

b) i). Suggest two reasons why this animal is well suited to Puntland climatic conditions.
.....
.....
.....[2 marks]



(ii) State two characteristics that you would select when breeding to get improved offspring of this animal. [2 marks]

1.
2.

c) Name one parasite that affects this animal..... [1 mark]

d) List any two effects of parasites on livestock [2marks]

.....

.....

QUESTION EIGHT (10 Marks)

(a) List three factors that affect the price of a commodity [3 marks]

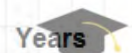
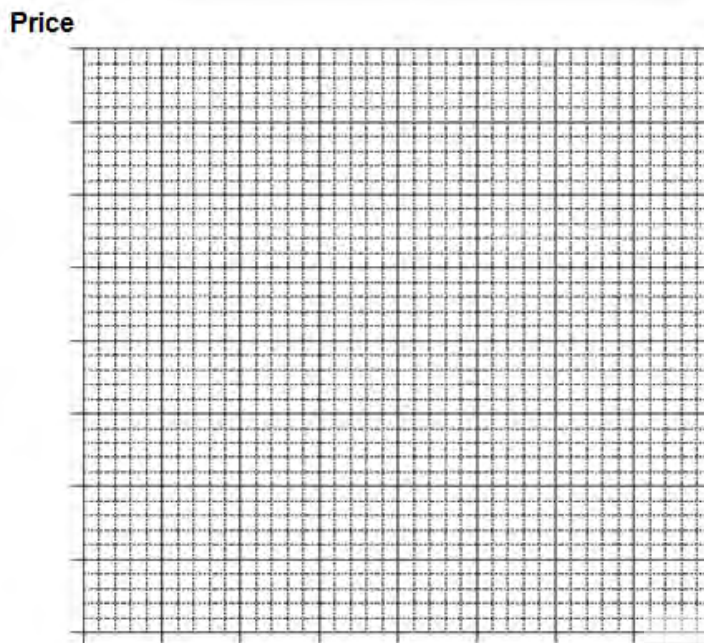
- (i)
- (ii)
- (iii)

(b) Mention two functions of farming organisations. [2 marks]

- (i).....
- (ii).....

c). The table shows the price of a farm product over time.

Price of Product over time	
Year	Price (\$/ Tonne)
1995	570
1996	500
1997	490
1998	420
1999	320
2000	280
2001	380



- i. Construct a graph showing this information. [3 marks]
- ii. Explain ONE factor that may lead to price fluctuations such as those shown in the table.

.....

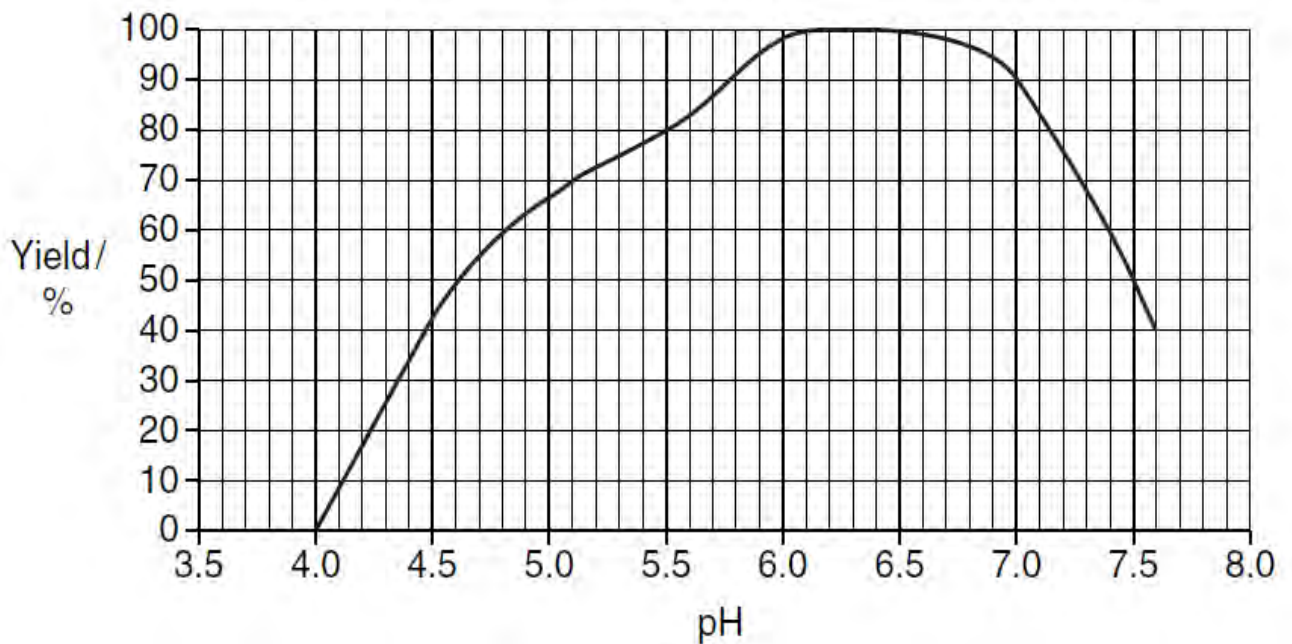
[2 marks]

QUESTION NINE (9 Marks)

- a) Soil pH is very important for soil sampling. State what the words pH stands for.

.....[1mark]

- b) The graph below shows the effect of soil pH on the growth of a variety of soya bean.



- (i) What percentage yield of soya beans would be expected from a plot with pH 5.0?

.....[1 mark]

- (ii) What is the pH range in which this crop grows best?

.....[1 marks]



(iii) Suggest why the crop produces lower yields below pH 6.

.....
.....
..... [2 marks]

(iv) Describe how a farmer can increase the pH of such a soil.

.....
.....
..... [2 marks]

(v) Suggest why sandy soils often have a low pH.

.....
..... [2marks]

QUESTION TEN (7 Marks).

(a) The figure shows land that is being cleared in preparation for farming.



State **three** undesirable consequences of deforestation.

- i)
-
- ii)
-
- ii)
- [3 marks]

b). Why is burning of fields during land clearing discouraged in crop production.
.....
.....
..... [2marks]

c). State the advantages of organic farming in relation to environmental conservation.
.....
.....
..... [2 marks]

END

