



EXAMINATIONS COUNCIL OF SWAZILAND
 in collaboration with
 UNIVERSITY OF CAMBRIDGE LOCAL EXAMINATIONS SYNDICATE
 Swaziland General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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AGRICULTURE

6882/01

Paper 1

October/November 2011

1 hour

Candidates answer:

- Section A:** Multiple Choice on the Question Paper
- Section B:** Short Answer on the Question Paper

READ THESE INSTRUCTIONS FIRST

Write your Centre Number, Candidate Number and Name on all the work you hand in.
 Write in dark blue or black pen.
 You may use a soft pencil for any diagrams or graphs.
 Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
 The number of marks is given in brackets [] at the end of each question or part of the question.

For Examiner's Use	
Multiple Choice	
Simple Response	
Total	

This document consists of **10** printed pages and **2** blank pages.



Section A: Multiple ChoiceAnswer **all** questions (20 Marks)

For each of the following questions, place the appropriate letter in the box to indicate the correct answer.

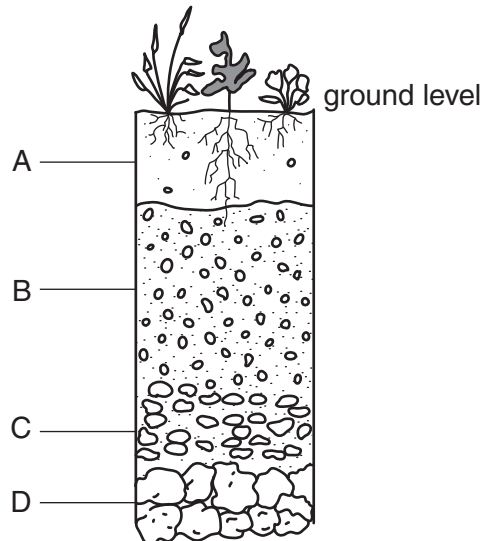
1 Which agricultural practice involves the growing of plants in nutrient solutions?

- A biotechnology
- B hydroponics
- C hydrotherapy
- D organic farming

2 What can cause physical weathering?

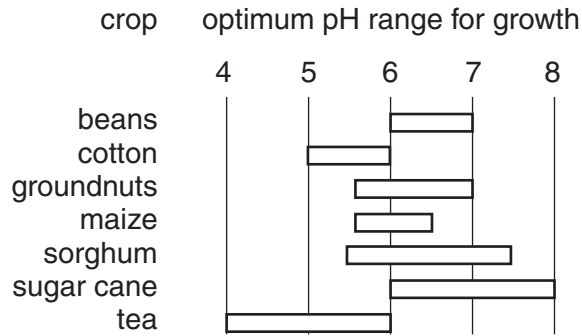
- A carbonation
- B oxidation
- C plant roots
- D running water

3 The diagram shows a soil profile.



Which soil layer has most soil micro-organisms?

- 4 The diagram shows the optimum pH for the growth of different crops.



What is the optimum pH range for maize?

- A 5.5 – 6.5
 B 5.5 – 7.0
 C 6.0 – 7.0
 D 6.0 – 8.0

- 5 How does a systemic insecticide get into a pest? It gets into the pest by

- A contact
 B eating
 C inhaling
 D sucking

- 6 What is commonly used for treating wooden fencing posts?

- A aerosols
 B creosote
 C fungicides
 D petrol

- 7 What is a weed?

- A a broad leaved plant
 B a fast growing plant
 C a narrow leaved plant
 D an unwanted plant

- 8 What could be the effect of strong winds on a plant?

- A low rate of respiration
 B low rate of transpiration
 C physical damage of plant leaves
 D stunted growth in plant root

- 9 Soil type can be identified using the 'sausage' test.
Which type of soil will form a ribbon that does not break?

- A clay
- B loam
- C sand
- D silt

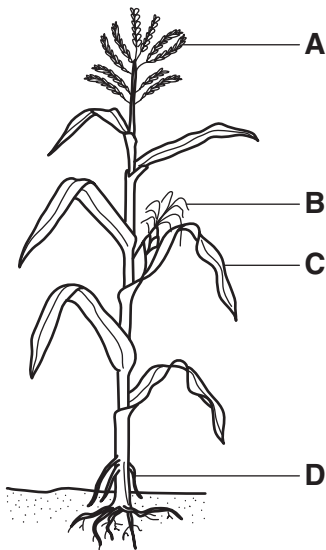
- 10 The *chart* compares indicator colour with pH value.

indicator colour	orange	yellow	pale green	blue green
pH value	5	6	7	8

Which colour indicates an alkaline soil?

- A blue green
- B orange
- C pale green
- D yellow

- 11 The diagram shows a maize plant.



On which part of the plant are the stamens found?

12 Photosynthesis can be represented as:



What are X and Y?

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

13 What is meant by the term *seed rate*?

- A** the amount of seed that germinates
- B** the amount of seed sown per unit area
- C** the depth at which seed is sown
- D** the time taken for the seed to germinate

14 Bile aids digestion in animals.
Where is bile stored?

- A** caecum
- B** duodenum
- C** gall bladder
- D** pancreas

15 What is an advantage of using concrete for floors, rather than earth, in livestock building?

- A** It is a cheaper material.
- B** It is easier to clean.
- C** It is free from disease.
- D** There is less risk of animal injury.

16 Which term describes the **difference between returns and variable costs** in a balance sheet?

- A** current balance
- B** gross margin
- C** net profit
- D** profit or loss

17 Which of the following leads to an increase in sales of a product when the price is constant?

- A decrease in income
- B decrease in the product
- C increase in similar products
- D increase in supply of a product

18 What is the percentage of nitrogen in a 2:3:4 (36) fertiliser?

- A 3%
- B 8%
- C 12%
- D 16%

19 Why do newly born calves need colostrum?

- A for fast growth rate
- B to encourage scouring
- C to obtain antibodies
- D to obtain antibiotics

20 What is the first action a farmer should take after noticing signs of ill health in chickens?

- A add antibodies to their diet
- B cull the infected birds
- C introduce a foot bath
- D isolate the sick birds

Section B: Short Answer Response Items
Answer **all** questions (40 Marks)

21 Name the farming system whereby farmers move from less productive to fertile land.
..... [1]

22 What type of land tenure is *Swazi Nation Land*?
..... [1]

23 What does the accumulation of carbon dioxide and other pollutants in the atmosphere result in?
..... [1]

24 Which term describes severe land degradation?
..... [1]

25 Name a common invasive weed that has been declared a national disaster in Swaziland.
..... [1]

26 (a) Name the type of reproduction that uses plant parts instead of seeds.
..... [1]

(b) Give **one** example of a crop plant where plant parts are used for reproduction.
..... [1]

(c) Name the type of germination for each of the following crops
(i) beans [1]

(ii) maize [1]

27 Which term describes the number of animals per unit area of land?
..... [1]

28 State **two** ways of controlling soil temperature.
1.
2. [2]

29 What could be the result of high rainfall intensity on bare soil?
..... [1]

30 How are viral diseases prevented in poultry?
..... [1]

31 Give **one** instance where biotechnology can be used to improve yields.
..... [1]

32 Name **one** career opportunity in agriculture.
..... [1]

33 State the role of light in photosynthesis.
..... [1]

34 What term describes the process by which energy is released from food substances in living cells?
..... [1]

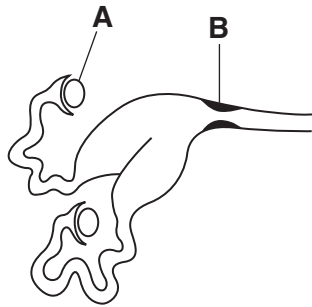
35 Name the **two** types of pollination.
1.
2. [2]

36 What term describes an organism that depends on another for survival?
..... [1]

37 Name an example of a pest that feeds by biting and chewing plant parts.
..... [1]

38 Give **two** examples of intensive grazing systems.
1.
2. [2]

39 Name the parts labelled **A** and **B** in the diagram below.



A

B [2]

40 What term describes the fertilisation of a cow without a bull present?

..... [1]

41 Name the type of irrigation that supplies water directly to the root zone of a crop.

..... [1]

42 What term describes chemicals used to kill weeds? [1]

43 What is the name of the practice of growing maize and beans in the same field in one season?

..... [1]

44 Give **two** examples of organic fertilisers.

1.

2. [2]

45 Give **one** way in which water is lost from the soil. [1]

46 Complete the following sentence.

People who pay for using farm land are called [1]

47 What is the watery food mixture after digestion in the stomach called?

..... [1]

48 Name a water storage method which is likely to provide clean water.

.....[1]

49 Describe how a saw can be maintained to last longer.

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

50 Why is the wheelbarrow classified as intermediate technology?

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

END OF PAPER

