**EXAMINATIONS COUNCIL OF SWAZILAND**

**JUNIOR CERTIFICATE EXAMINATION**

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CANDIDATE

NAME

CENTRE CANDIDATE

NUMBER NUMBER

**Agriculture 516** **/01**

Paper 1 **October/November 2011**

 **1 hour 30 Minutes**

**READ THESE INSTRUCTIONS FIRST**

1. Answer **ON THE QUESTION PAPER** by completing each question as instructed.

2. Work quickly. If a question seems hard, skip it and come to it later.

3. You can make your answers quite short and clear. A correct answer will score

 marks, even if it is short.

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| ***For official use*** |
| ***Marks obtained*** |  |

This question paper consists of **11** printed pages and **1** blank page.

1. (a) What is agriculture?

 .................................................................................................................................

 .................................................................................................................... [1]

 (b) Giveany **three** reasons why agriculture is important to Swaziland.

 (i) ........................................................................................................

 (ii) ........................................................................................................

 iii) ....................................................................................................... [3]

 (c) Why is sugar called “**Swazi Gold**”?

 .................................................................................................................. [1]

1. (a) Where in Swaziland would you find the following:

 (i) A cotton ginnery..............................................................................

1. A fruit canning factory...................................................................
2. Most seed cane fields ........................................................
3. A tobacco cooperative .................................................................... [4]
4. Why are most forest plantations found in the highveld in Swaziland?

 Give one reason.

 ..................................................................................................................

 ................................................................................................................... [1]

1. (a) What is cultivation?

 .................................................................................................................

 ................................................................................................................. [1]

 (b) Why would farmers fail to produce a high yield in vegetable production

 under very acidic soils? Give any **two** reasons.

 (i) ........................................................................................................

 (ii) ........................................................................................................ [2]

 (c) Why would you choose to use a spade other than a hoe when preparing

 the soil for planting?

 .................................................................................................................

 ................................................................................................................. [1]

 (d) How deep should be the fine tilth in vegetable production?

 ………………………………………………………………………… [1]

4. (a) Why is monoculture an ideal condition for the spread of pests and

 diseases? Give **one** reason.

 .................................................................................................................

 ................................................................................................................. [1]

(b) What factors would a farmer consider when controlling pets and diseases?

 Give any **four** things.

 (i) ........................................................................................................

 (ii) ........................................................................................................

 iii) .......................................................................................................

 (iv) ....................................................................................................... [4]

1. How can the following help to control soil erosion?
2. Mulching .................................................................................................................

 .................................................................................................................

1. Tie ridging .................................................................................................................

 .................................................................................................................

1. Grass strips ......................................................................................................

 ......................................................................................................

1. Planting trees ......................................................................................................

 ......................................................................................................

1. Storm drains ......................................................................................................

 ...................................................................................................... [5]

1. Figure 1 below shows two broomsticks joined by a string which is level to the ground and the distance between broomstick A and broomstic B is 5 metres..

Broomstick B

Broomstick A

30cm

5m

1. Calculate the percentage slope of the land. Show your working.

 [3]

1. Give any **two** things a farmer would use to determine how a particular

 piece of land could be used.

 (i) ......................................................................................................

 (ii) ...................................................................................................... [2]

1. Define the following terms used in agriculture.
2. Dryland crop.................................................................................................................

 ....................................................................................................................

1. Intercropping ..............................................................................................................

 ............................................................................................................

1. Topping ..................................................................................................................

 ..................................................................................................................

1. Interval Planting .......................................................................................................

 .......................................................................................................

1. Legumes ..................................................................................................................

 .................................................................................................................. [5]

1. (a) Name the **three** main enemies of crops in storage.

 (i) ........................................................................................................

 (ii) ........................................................................................................

 iii) ....................................................................................................... [3]

 (b) How would you correct a problem of grain weevil in a grain tank?

 .................................................................................................................. [1]

1. How long is the grain tank kept closed when using the fumigant before

 the maize is used?

 ................................................................................................................... [1]

1. (a) Thembekile has 120 layers. In the past 30 days her birds have produced

 3060 eggs. Calculate the laying percentage of the birds. Show your working.

 ........................................................ [3]

(b) How can one tell if the eggs are fresh or bad?

 ................................................................................................................. [1]

(c) Why should you avoid eating cracked eggs?

 ................................................................................................................. [1]

1. (a) What is candling of an egg? .............................................................................

 .................................................................................................................................

 ................................................................................................................................. [1]

 (b) How does a brooding hen avoid a developing chick from sticking on the side on the shell?

 ................................................................................................................................. [1]

 .................................................................................................................................

 (c) (i) What does a farmer use to warm chicks if the hen dies?

 ........................................................................................................................

 (ii) The process of providing heat to chicks is known as

 ..........................................................................................................................

 (iii) How long is the process of providing heat to chicks?

 .......................................................................................................................... [3]

1. (a) Mention any **three** rules or practices you would follow when harvesting fruits to reduce

 damage or losses.

1. ...........................................................................................................................
2. ..........................................................................................................................
3. ......................................................................................................................... [3]

 (b) Why would it be important to grade your fruits after harvesting? Give **two** reasons.

 ...................................................................................................................................

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

1. Why is each of the following activities important in managing fruit trees?
2. Weeding ..................................................................................................................

 ..................................................................................................................

1. Watering ..................................................................................................................

 ..................................................................................................................

1. Fertilising ..................................................................................................................

 ..................................................................................................................

1. Pruning ..................................................................................................................

 ..................................................................................................................

1. Pests and disease control ...........................................................................................

 .................................................................................................................. [5]

13. (a) How does HIV/AIDS affect agriculture production in Swaziland? Giveany **two** ways.

 (i) ................................................................................................................................

 (ii) .............................................................................................................................. [2]

 (b) How does agriculture contribute towards HIV/AIDS infected and affected people?

 Give any **two**.

1. .....................................................................................................................
2. ..................................................................................................................... [2]
3. What is the best way for preventing HIV/AIDS for school going pupils?

 ................................................................................................................................... [1]

14. (a) Name the **two** life-threating deficiency diseases, in children caused by malnutrition.

 (i) ...................................................................................................................

(ii) ................................................................................................................... [2]

1. What is dietary fibre?

...................................................................................................................................... [1]

1. Give **one** function of dietary fibre.

...................................................................................................................................... [1]

1. Give an example of a waterborne disease.

...................................................................................................................................... [1]

1. (a) (i) Complete the chemical equation for photosynthesis below.

 ...........................+H2O sunlight C6H12o6  + 602(g) [1]

Chlorophyll

1. What happens to the rate of photosynthesis when you increase the amount of light?

..................................................................................................................................................................................................................................................... [1]

 (b) Complete the chemical equation for respiration below.

 C6H1206 + ...................... Energy + ...................... + ......................... [3]

1. (a) What are the **three** advantages of keeping rabbits over other types of livestock?
2. .........................................................................................................................
3. .........................................................................................................................
4. ........................................................................................................................ [3]

 (b) How would you solve the following problems in rabbit production?

 (i) A doe die immediately after kindling and leaving the litter.

 ......................................................................................................................

 ..................................................................................................................... [1]

1. Early mating in a litter. ..............................................................................

..................................................................................................................... [1]

1. (a) How could the following measures help to improve the quality of

 cattle on Swazi Nation Land.

1. Improved breeding.......................................................................................

 ........................................................................................................

1. Reduced overstocking............................................................................

 ...............................................................................................................

 iii) Improved pasture..................................................................................

 ........................................................................................................ [3]

 (b) State any **two** signs of “ true heat” in cows.

 (i) .........................................................................................................

 (ii) ......................................................................................................... [2]

1. (a) Give **one** agricultural use of the following types of loan

 (i) Short –term loan...............................................................................

 (ii) Medium-term loan...........................................................................

 iii) Long –term loan............................................................................... [3]

 (b) State **two** factors which determine the market price of a product.

1. ........................................................................................................

 ........................................................................................................

1. ........................................................................................................

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

1. (a) State **two** bad management practices that can cause damage to pasture.

(i) ........................................................................................................

 ........................................................................................................

(ii) ........................................................................................................

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

 (b) Describe **three** ways in which you can improve the pasture.

1. ........................................................................................................

 ........................................................................................................

1. ........................................................................................................

 ........................................................................................................

 iii) .......................................................................................................

 ........................................................................................................ [3]

1. (a) What is agricultural extension?

 ....................................................................................................................

 ................................................................................................................... [1]

 (b) State **four** ways in which agricultural extension service provide

 information to farmers.

1. ........................................................................................................

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1. ........................................................................................................

…………………………………………………………………..

 iii) ........................................................................................................

 (iv) ........................................................................................................

 ………………………………………………………………… [4]

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