EXAMINATIONS COUNCIL OF ZAMBIA

Examination for School Certificate Ordinary Level

Agricultural Science
Paper 1 Theory

5037/1

Wednesday   **16 NOVEMBER 2016**

Additional Materials
Answer Booklet

Time: 2 hours

Instructions to candidates

Write your name, centre number and candidate number in the spaces at the top of this page and on the Answer Booklet.

There are **Ten** questions in this paper.

Section A

Answer **all** questions.

Write your answers in the spaces provided on the question paper.

Section B

Answer any **three** questions.

Write your answers in the Answer Booklet provided.

At the end of the examination:

1   fasten the Answer Booklet securely to the question paper.

2   enter the numbers of the **Section B** questions you have
         answered in the grid for Examiner's use.

Information for candidates

The number of marks is given in brackets [ ] at the
end of each question or part question.

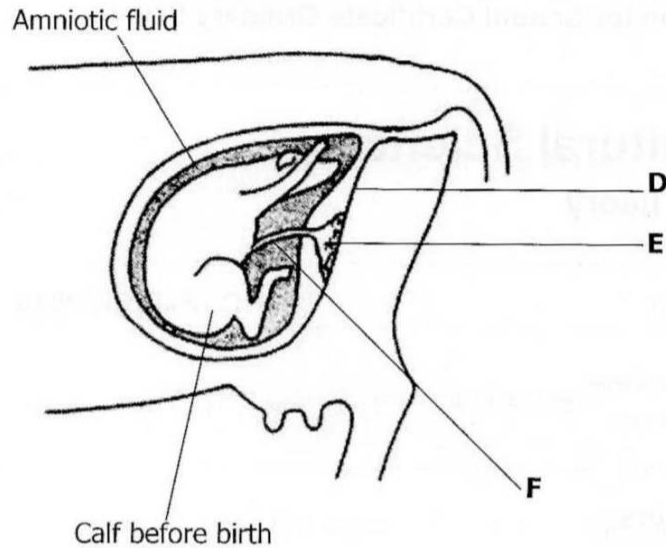You are advised to spend no longer than 40 minutes on **Section A**.

Cell phones are not allowed in the examination room.

FOR EXAMINER'S USE	
Section A	
Section B	
Total	www.zedpastpapers.com

Section A

Answer all questions in this section

1   *Figure 1* shows a developing foetus in the uterus of a cow.

Amniotic fluid

D

E

F

Calf before birth

(a)   Name the structures labelled **D**, **E** and **F**.

D ....

E ....

F .... [3]

(b)   Describe how structure **E** carries out its functions.

....

....

.... [3]

(c)   State the recommended guide for feeding a cow during gestation.

....

....

.... [2]

[8 marks]

2   **(a)**   What is forestry?

....

.... [1]

(b)   Suggest **three** tree species that can be used to improve soil fertility.
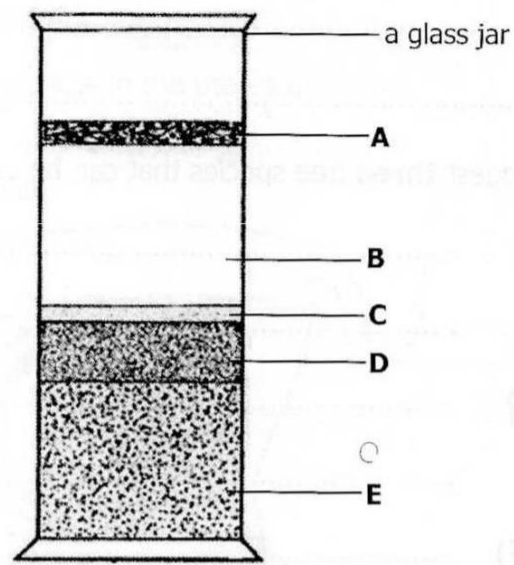
(i)   ....

.... [1]

(ii)   ....

.... [1]

(iii)   ....

.... [1]

(c)   State a suitable site for growing trees.

....

....

....

....

.... [4]

[8 marks]

3   *Figure 2* shows an analysis of a soil sample.

a glass jar
A
B
C
D
E

Figure 2

(a)   Name the parts labelled **A** to **E**.

A   ....

B   ....

C   ....

D   ....

E   ....   [5]

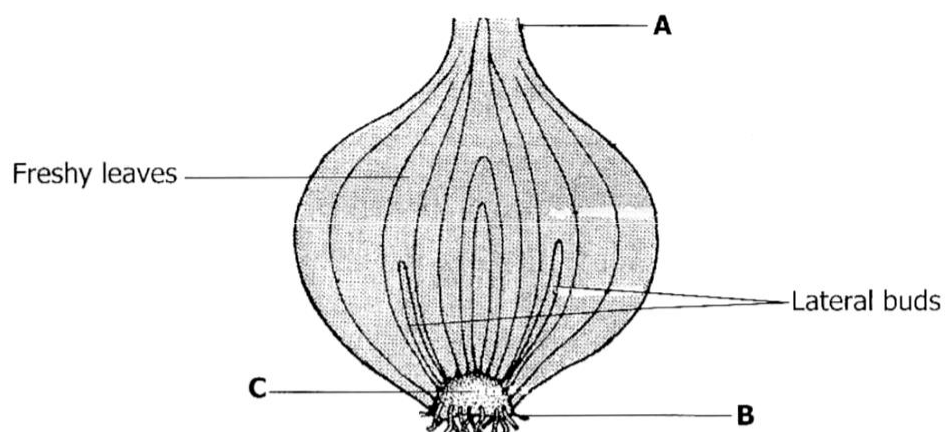(b)   State **three** soil components that cannot be determined by using the experiment in *figure 2* above.

1   ....

2   ....

3   ....   [3]

[8 marks]

4   *Figure 3* shows an onion bulb.

Figure 3

(a)   Name the structures labelled **A** to **C**.

   A   ....

   B   ....

   C   ....   [3]

(b)   State **two** functions of the structure labelled **C**.

   ....

   ....   [2]

(c)   Give **one** observable adaptation of *figure 3* that shows that it is a
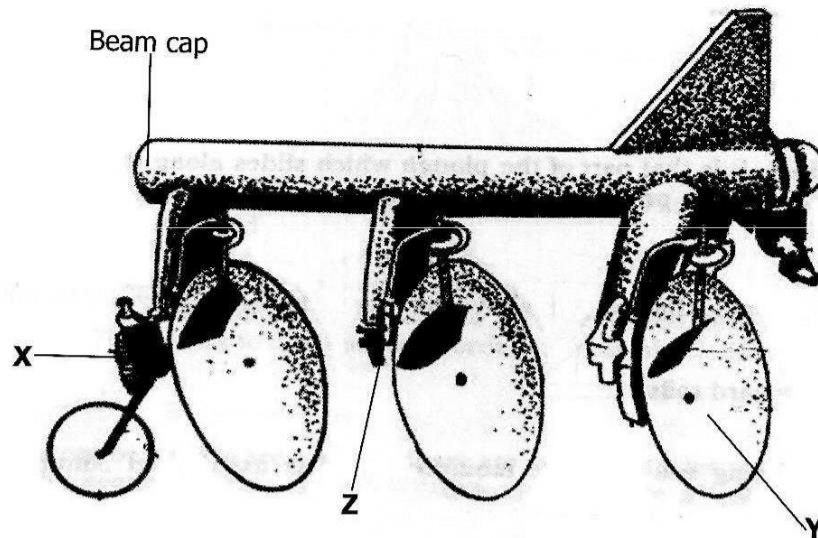   storage organ.

   ....

   ....   [1]

(d)   Explain how onions are propagated.

   ....

   ....   [2]

[8 marks]

5 *Figure 4* shows a tractor drawn implement.

Beam cap

X

Z

Y

Figure 4

(a) Identify the implement represented by *figure 4*.

.... [1]

(b) State the functions of parts labelled **X**, **Y** and **Z**.

X...

Y...

Z... [3]

(c) State **two** advantages of using the implement represented by *figure 4*.

(i) ....

.... [1]

(ii) ....

.... [1]

(d) How should a farmer prepare power drawn implements for storage?

....

.... [1]

(e) State the type of storage building for complex equipment on a farm.

....

.... [1]

[8 marks]

Section B

Answer any three questions from this section.

6 **(a)** Explain the harm caused by agriculture to the environment. [11]

   (b) Give reasons why farmers should carry out experiments with new
            and own technologies. [9]

                                                             [Total: 20]

7 **(a)** Describe the meaning of "Conservation farming." [4]

   (b) Outline how farmers practice conservation farming. [10]

   (c) Discuss the importance of practicing conservation farming. [6]

                                                             [Total: 20]

8 **(a)** Describe the management of broiler chicks from day old to eight weeks
            under the following headings:

            (i)   brooding,

            (ii)   feeding,

            (iii) maintenance of health. [15]

   (b) Describe the collection and storage of eggs. [5]

                                                             [Total: 20]

9 **(a)** Describe secondary cultivation. [10]

   (b) Explain the advantages of using a seed drill over broadcasting seed
            when sowing seeds on the nursery bed. [2]

   (c) State **four** advantages of using the nursery bed in vegetable
            growing. [4]

   (d) Define "**hardening off**" in vegetable production and describe **two**
            ways in which it is achieved. [4]

                                                             [Total: 20]

10 **(a)** Define a farm budget. [5]

   (b) Outline the importance of a farm budget. [9]

   (c) State the basic forms of farm budgets. [6]

                                                             [Total: 20]