Agriculture Past Papers.

SIR ARTHUR LEWIS COMMUNITY COLLEGE
DIVISION OF AGRICULTURE

CERTIFICATE IN GENERAL AGRICULTURE
2010/2011 ACADEMIC YEAR
END OF SEMESTER SECOND EXAMS

#F26

Instructions: **1.**This paper consists of **FIVE QUESTIONS**.

2. Read carefully then answer **ANY FOUR** the questions.

3. Begin each question on a **NEW PAGE**.

1. a) Define the following terms:

      i) pillar,   ii) foundation   iii) concrete.   [6]

b) A farmer desires to build a livestock production shelter on sloping ground, in which he must use pillars. He has a choice between concrete and wooden pillars.

Explain to the farmer:

      (i)   **TWO reasons** why <u>**concrete**</u> could be a good choice.   [4]

      (ii)   **TWO reasons** why <u>**wood**</u> could be good choice.   [4]

  c) What does the term "soil load bearing capacity means?   [2]

  d) Identify **TWO** requirements of a good foundation.   [4]

  e)   i) Name **ONE** type of shallow foundation.   [1]

      ii) Explain **TWO** advantages of shallow foundations.   [4]

Total 25 marks

2.   a) List TWO types of building materials used in high tunnel structures.   [2]

    b) Differentiate between the TWO classes of plastics and an example of each type. [4]

    c) In the table below list **THREE** advantages and **THREE** disadvantages of plastics as a building material in agricultural structures.

	Advantages	Disadvantages
1		
2		
3		

[6]

    d)   (i) Explain **ONE** shortcoming of high tunnels.   [3]

      (ii) Explain how you would overcome this shortcoming.   [3]

      (iii) Discuss **TWO** important factors one should consider when selecting a location

           for a high tunnel?   [3]

    e) Explain to a farmer TWO reason why he should grow vegetables in a green house. [4]

Total 25 marks

3.   List **THREE** factors one should take into consideration in locating farm buildings. [3]

b) Discuss **THREE** features poultry production unit should have.   [9]

c) Discuss **THREE** reasons why concrete floors are essential in pig pens.   [6]

d) What are the **TWO** main forms of roofs in agricultural buildings locally?   [2]

e)   State **ONE** advantage and **ONE** disadvantage of **EACH** type of roof mentioned in 3(d) above.   [4]

Total 25 marks

4.   Define the following terms:

a) Agricultural mechanization   ii) Engine   iii) simple machines   [6]

b) List **FOUR** parts of an internal combustion engine.   [4]

c) In relation to the cycles, what type of engines does most string trimmer Possess?   [1]

ii) Outline the events which take place in the operation of this engine.   [4]

d)   Describe in chronological order the step to follow when starting up the engine of the string trimmer.   [5]

e)   i) Identify **TWO** sources of power used on farms.   [1]

ii) State **ONE** advantage and **ONE** disadvantage of each source.   [4]

Total 25 marks

5.   a)   Define the following terms:

i) Machine   ii) Incline plane   iii) Pulley   iv) lever   [8]

b)   A farmer needs to raise a filled 45 gallon drum unto the back of a truck. To do this he uses an incline plane. He slides the 2200 Newton drum up a six (6) meter ramp unto the back of the truck which stands one (1) meter off the ground. The figure below represents the ramp.
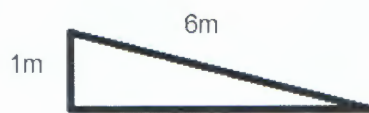

figure 1 - the ramp

i)   What is the **ideal mechanical advantage** of the ramp?   [3]

ii)   If the farmer exerts a force of 500 Newtons to move the drum up the ramp at a constant speed, what is the **actual mechanical advantage** of the ramp?   [3]

iii)   What is the efficiency of the ramp?   [3]

c)   Why is the efficiency of a machine never 100%?   [2]

d)   Fill in the table below.

Type of lever	Example found on the farm

[6]

Total 25 marks

a) $IMA = \dfrac{d_{i}}{d_{wr}} =$

b) $AMA = \dfrac{F_{wr}}{F_{i}} =$

c) $eff = \dfrac{w_{wr}}{w_{i}} = \dfrac{}{}$

T... ... ...favourite pastime is fishing A...