

Uva Wellassa University
B.Sc. in Export Agriculture
Bachelor of Animal Science



End Semester Examination June/July 2010
Year II Semester II
Agricultural Farm Mechanization AAS 202-2 (Repeat)

Instructions

Answer **all** questions. Each question bears equal marks.

No. of questions : Four (04)

No. of pages : Three (03)

Total marks allocated : 100%

Time : Two Hours (02 hrs)

Question 01

Write short notes on the following;

- a. Four stroke cycle engine.
- b. Indicated Power.
- c. Differential.
- d. Cooling system.

Question 02

- a. Define the term "Tillage"
- b. "Tillage operations improve the soil physical properties". Discuss.
- c.
 - i. What is meant by "Zero Tillage".
 - ii. Discuss the advantages of zero tillage.
- d. Briefly explain the following with illustrations;
 - i. Mould board plough.
 - ii. Disc plough.
 - iii. Sub soiler.
 - iv. Rotary plough.

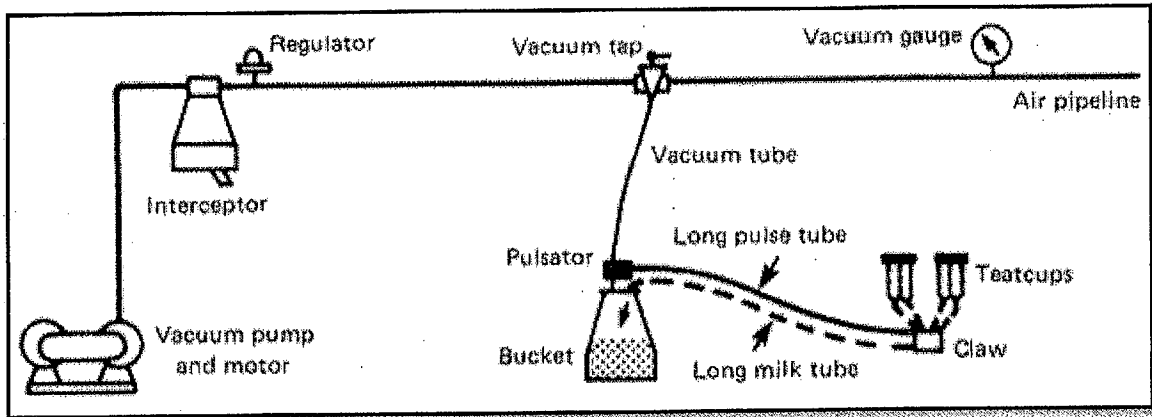
Question 03

- a. Define;
 - i. Draft.
 - ii. Drawbar Power.
 - iii. Specific Draft.
- b. What are the factors that should be considered in designing of a tillage implement?
- c. How does the field efficiency of an implement change in the field from the rated value?

Question 04

- a.
 - i. What is the importance of use of heat in dairy processing plant?
 - ii. Graphically explain the Co current and Counter current heat transfer behavior in a dairy plant.
 - iii. Why is the cream separation unit operation important in milk powder production?
 - iv. Explain the mechanism of Plate Heat Exchanger (PHE) in Sterilized milk processing plant.
- b. Name the **three (03) principles of milk extraction** based on which mechanical milking was developed.

c. Answer the following questions (i & ii) using the diagram given below;



- i. Identify the type of milking machine given in the above diagram.
 - ii. Mention the specific function of each of the following parts;
 - A. Vacuum regulator.
 - B. Pulsator.
 - C. Vacuum gauge.
 - D. Interceptor.
 - E. Vacuum pump.
- d. List down the **four (04)** main components of an automatic milking system (AMS).

