Uva Wellassa University
Faculty of Animal Science & Export Agriculture
BSc in Export Agriculture/ Bachelor of Animal Science

End Semester Examination -March/ April 2013
Year II Semester I
Agricultural Farm Mechanization (EAG 202-2/AAS 202-2)

Instructions

Answer **all** questions. Each question bears equal marks.
No. of questions : Four (04)
No. of pages : Two (02)
Total marks allocated : 40%
Time : Two Hours (02 hrs)

Question 01

Write short notes on the followings;

a. Turning a two wheel tractor in flat land, and when climbing up and climbing down a mountain
b. Elements of power transmission
c. Power take off of two wheel tractor and four wheel tractor
d. Three point linkage and hitch of four wheel tractor
e. Starting a two wheel tractor
f. Mounting a plough onto a tractor

Question 02

a. Comment on the followings;
    i. Soil structure can be improved by tillage operations
    ii. Tillage operations may lead to form hard pans
    iii. Soil is more disturbed by modern tillage operations
b. With a help of a neat sketch/ sketches, describe the importance of the followings in relation to tillage implements;
    i. Share
    ii. Landslide
    iii. Mould board
    iv. Frog
    v. Coulter
    vi. Furrow wheel
    vii. Ground wheel

Question 03

Distinguish between the followings. Use diagrams and illustrations where necessary

a. Splashed lubrication and forced feed lubrication
b. Liquid cooling and air cooling
c. Lead and lag of valve timing system
d. Spark ignition and compression ignition
e. Gear pump and centrifugal pump

Question 04

a. Write a brief account on refrigeration systems.
b. The regenerative efficiency is defined as the percent of total heating regenerated.

   Calculate the regenerative effect using following information.

   Temperature of raw milk – 4°C

   Desired pasteurization temperature – 72°C

   Temperature of milk after regeneration – 55°C
c. Describe the principle of cream separation.
d. Briefly explain homogenization mechanism in a yoghurt processing plant using a single stage homogenizer.