

Uganda Martyrs University

Faculty of Agriculture

B. Agriculture II, Semester I Final Assessment: 2014/2015

Course Unit: Appropriate Agro-Mechanization

Time: 9:30 am -12:30 pm

Date: Wednesday, 10th December, 2014

Instructions:

Answer any five questions

Do not write anything on a question paper

Time: Three (3) hours

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1. Small holder farmers in Uganda are sensitive of new technologies that are introduced on farms and may not readily accept new technologies. As fresh university graduate of agriculture, what would you tell a farmer who wants to know the difference between **agricultural mechanization** and **appropriate agro-mechanization** with relevant examples (8marks)
 - b) What reasons would you **advance** to encourage the above farmer to adopt agro-mechanization (12 marks)
 2. The faculty of agriculture of Kisubi University recently acquired a new **precision planter**. The dean has requested you as a graduate of appropriate agro mechanization to **explain** to his first year students the planting methods the faculty can use to plant various crops at Kisubi faculty farm. (Give your explanation with illustrations 6marks)
 - b) What will be the roles of the precision seed planter? 6marks
 - c) Explain the advantages of using precision seed planters? 8marks
 3. a) Equator Valley Farm has not made use of the animals as a source of power on the farm. Advise the farm manager on the advantages of using animals as a source of power on the farm (8marks)
 - b) What factors are expected to influence the power output from the farm animals as a source of farm power (12 marks)
 4. Write short notes on the following principles while operating a backpack sprayer (9marks)
 - i) Principle of Coverage
 - ii) Principle of pressure
 - iii) Walking speed

- b) Describe the procedure you would follow to **calibrate** your newly acquired backpack sprayer for effective chemical application (**11 marks**)
5. a) Tillage is the manipulation of soil for any purpose. Outlining what each involves, differentiate between **primary tillage** and **secondary tillage** (**8marks**)
- b) Outline the objectives of primary and secondary tillage (**12 marks**)
6. With the aid of a sketch diagram, describe the importance of the components of a disc plough. (**20 marks**)
7. Explain the causes of deterioration of tyres on trailed implements as observed at equator valley farm (**10 marks**)
- b) Advise the manager on how he could maintain the farm tyres in a good working condition (**10 marks**)
8. a) Explain the reasons why agricultural produce should be processed. (**14marks**)
- b) Outline the importance of buildings as structures on the farm. (**6marks**)

Good luck