



"Investing in Africa's Future"

COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES

NACP 113 PRACTICAL AGRICULTURE I

SUPPLEMENTARY EXAMINATION

JANUARY 2022

LECTURER: MR. LARRY KIES

DURATION: 5 HOURS

INSTRUCTIONS

This exam has three questions. Choose ONE of the questions, then answer ALL parts of the question that you choose.

Do NOT include the questions in your answer sheet. Write **only** the answers.

Do NOT indicate your name anywhere on your answer sheet.

If you have calculations, drawings and/or graphs as part of your answer, you may do them on a separate paper, photograph them, and insert the photo in your document.

Save your file with the format (Question number) (Student number)
NACP113 Final Exam Supplementary.pdf

For example, student number 120120 answering question 1 should have the file name "Q1 120120 NACP113 Final Exam Supplementary.pdf"

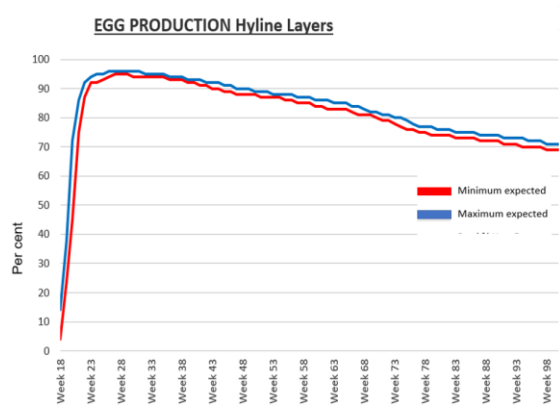
NACP113 Practical Agriculture 1 END OF SEMESTER Supplementary EXAM

It is important that you do your own work and use your own words. Copying and pasting from on-line sources or soft-copies of other resources (hand-outs, e-books, etc.), will result in serious loss of marks. **Copying other students' work, or allowing another student to copy your work, can result in Failing the Exam with zero marks for both students.**

In all cases, your answers should be based on the information given. For questions involving calculations, **show your work** since marks are allocated for the working.

Question 1

Refer to the graph below in answering question 1a.



- a. Tainara has a flock of layers that started with 800 birds. Part of the records for the flock, as recorded by the worker, is below.

Age in Weeks	Total eggs for the week	Production % hens housed	Birds Remaining	Number died	% Mortality cumulative	Production % hen-day
65	3865	xxxxxxx	767	1	xxxxxxxxxx	xxxxxxxxxx
66	2825 a.	xxxxxxx	763	4	xxxxxxxxxx	xxxxxxxxxx
67	3858 b.	xxxxxxx	761	2	xxxxxxxxxx	xxxxxxxxxx
68	3847	xxxxxxx	c.	3	d.	e.

Refer to the letters **a-e** in bold font in the table above to answer the questions below:

- State whether the number (**a.**) (Total eggs for week 66) is appropriate for the age of the flock, and justify your answer. (4 marks)
- State whether the number (**b.**) (Total eggs for week 67) is appropriate for the age of the flock, and justify your answer. (4 marks)
- Calculate the value of '**c.**'. (2 marks)
- Calculate the value of '**d.**'. (2 marks)
- Calculate the value of '**e.**'. (2 marks)

vi. Layers concentrate costs \$45.00 per 50 kg.

Maize costs \$17 per 50 kg. The mixture used to make layers mash was 2 bags concentrate:3 bags maize.

Tainara sells her eggs for \$0.85 per dozen.

Discuss the profitability of her project during week **65**. (4 marks)

b. Explain the procedure of disinfecting a broiler house using a knapsack sprayer. (6 marks)

c. Write an essay discussing the practical experiences **you** had with *poultry* in this course and how they will help prepare you for a career after graduation. (10 marks)

d. Chancey had a batch of 600 broilers. He weighed them every week with the results in the table below.

Draw a graph that shows their growth, being sure to include all relevant axes titles etc. (8 marks)

Age in weeks	0		1		2		3		4		5		6	
									M	F	M	F	M	F
Wt in g	46		92		175		330		640 620		1200 1160		1750 1650	

e. Chancey also kept a record of the numbers in the house. Part of the record is below. Give the values of **W** and **X**, and comment on the acceptability of **W**. (4 marks)

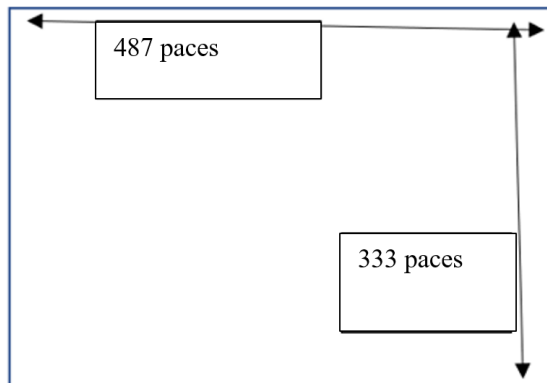
Date	Day	Deaths	Cum Mort	Sold Live	Sold Dressed	Balance	Comments
5 Nov	41	0	30			570	
6 Nov	42	16	W	3	25	X	

e. To answer the question below, you may use other methods to check your work, but understanding of the conversion method used in class must be shown.

Sara harvested 33 bags (50 kg) of maize from her field measuring 15 Ha.

Calculate her yield in t/Ha and comment on whether it is good. (4 marks)

f. Sueli estimated the length of her pace by taking 61 steps to cover 50 m. She then measured the field below. Give the area in m^2 and *estimated* in hectares. (5 marks)



g. Give the weights recorded on the scales below. (2 marks)

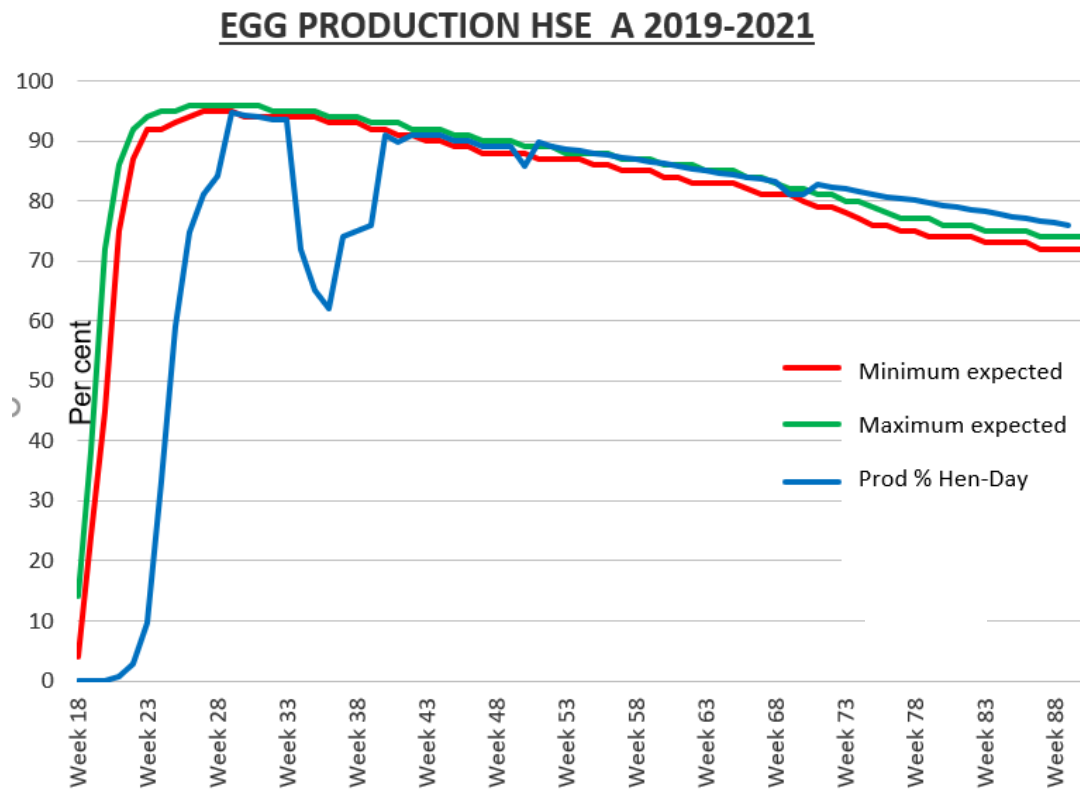


h. Give three purposes of ear tagging a calf. (3 marks)

END OF QUESTION 1

Question 2.

a. The graph below shows the production of a flock of 2000 layers at Africa University. Answer the questions based on this graph.



- i. What was the Production Percent-Hen Day for the weeks below:
Week 18
Week 35
Week 63
Week 83
(4 marks)
- ii. What are the names of the feeds that should be given to the birds:
before Week 18
during Week 68
(2 marks)
- iii. Discuss the most likely cause of the change in production in weeks 63-68. (2 marks)
- iv. Discuss what happens if hens are given feed that is too little and/or deficient in some of the essential foods. (6 marks)

- v. Layers concentrate cost \$43 for 50 kg. Maize cost \$16 per 50 kg. The mixture used to make layers mash was 2 bags concentrate to 3 bags maize. Eggs were sold for \$1.80 per dozen.

Discuss the profitability of this flock in week 53. (7 marks)

- b. Discuss the different systems of keeping laying hens and the advantages of each system.

(12 marks)

- c. Explain how to tell if a laying hen is probably productive or not.

(8 marks)

- d. To answer the question below, you may use other methods to check your work, but understanding of the conversion method used in class must be shown.

Fortune harvested 24 bags (50 kg) of maize from her field measuring 13 Ha.

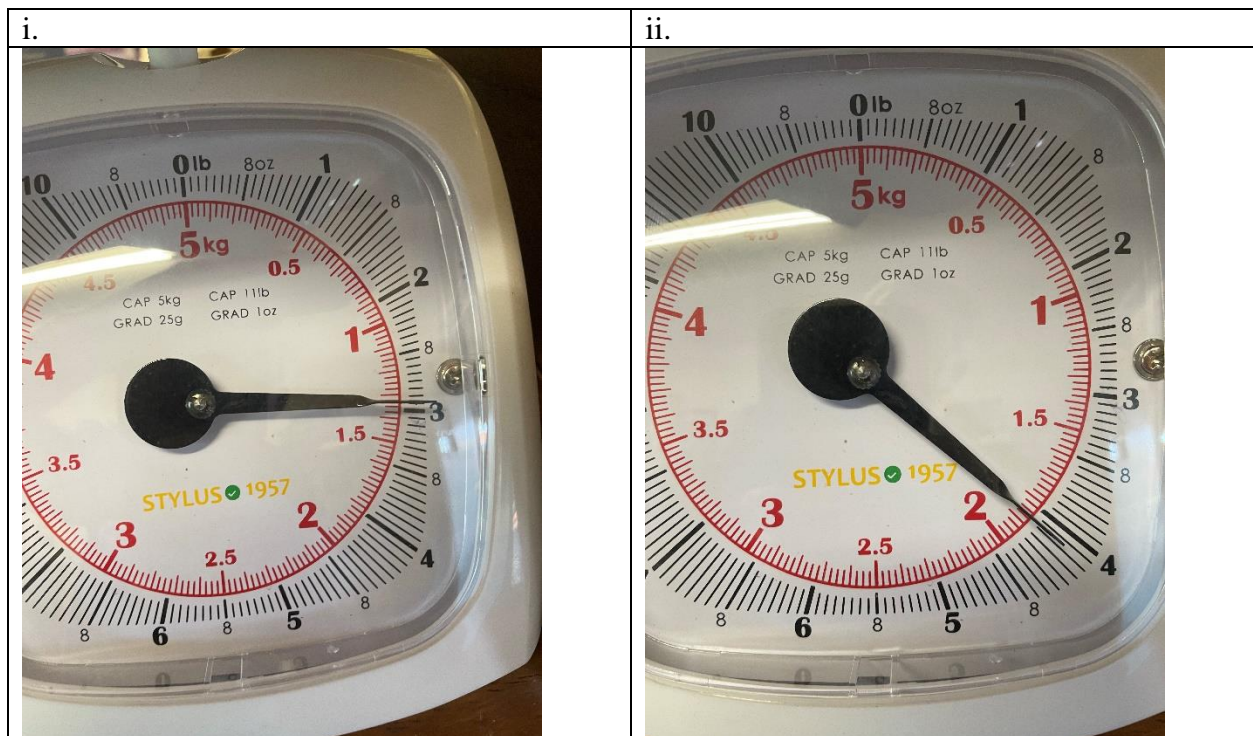
What was her yield in t/Ha? Was it good? Justify your answer.

(4 marks)

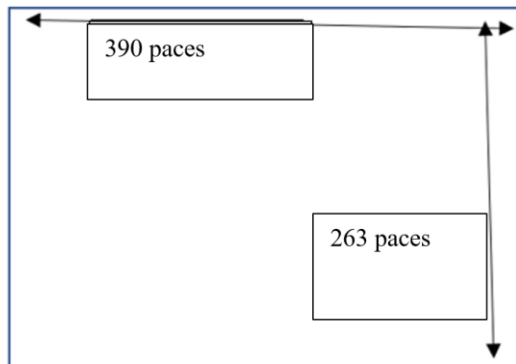
- e. Discuss how to use your sense of *smell* to assess whether a batch of broilers that is four weeks old is alright. (4 marks)

- f. Give the weights recorded on the scales below.

(2 marks)



g. Amos counted 58 paces to walk 50 m. He then measured the field below. What is the area in m^2 and *estimated* in hectares? (5 marks)



h. Draw a diagram to show the correct position to place an ear tag on a calf.

Give three reasons for ear tagging calves.

(4 marks)

END OF QUESTION 2

Question 3.

a. Munyaradzi bought 3000 point of lay pullets on 1 January 2022. The mortality was 0.5% per month. His production was typical of a flock of Hyline layers.

i. Draw a table to show the estimated number of hens remaining and eggs that will be produced each month. (9 marks)

ii. Layers concentrate costs \$48 per 50 kg. Maize costs \$20 per 50 kg. The mixture used was 2 bags concentrate to 3 bags maize.

Eggs were sold for \$3.30 per tray of 30 eggs.

Discuss the profitability of the flock in September if production is 84% (6 marks)

iii. Munyaradzi needs advice on setting the price of eggs each month. Based on your answer to 3i and 3ii, say what price he needs to receive to make a good profit in June and August. (6 marks)

iv. Give the term for: (4 marks)
the disease prevented by LaSota vaccine

a young male chicken

a female chicken that is laying eggs

a female chicken 18 weeks old which is ready to start laying eggs

b. Discuss the activities with **cattle** that **you** carried out during your Practical Work Experience, and what **you** learned from the activities. (5 marks)

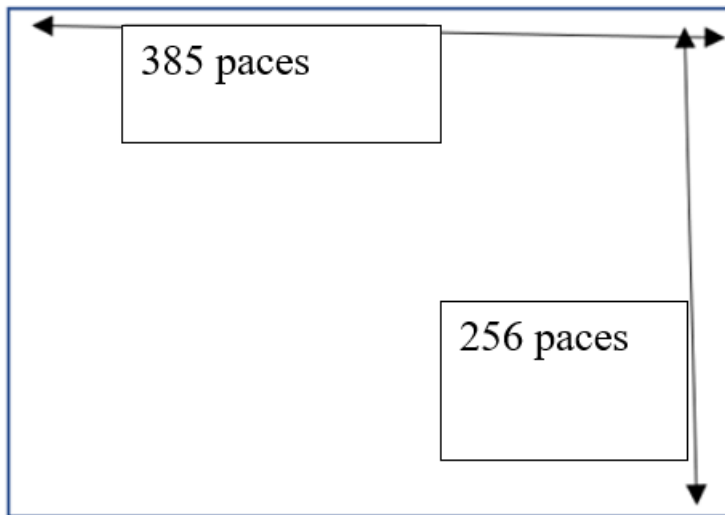
c. Explain how to use your senses to assess whether a flock of broilers is ok. (10 marks)

d. Calculate the below. You may use other methods to check your work, but understanding of the conversion method used in class must be shown.

i. Gracia harvested 140 bags (50 kg) of maize from her field measuring 2 Ha. Was her yield in t/Ha reasonable? Explain your answer (4 marks)

ii. Simflossa planted 5 hectares of potatoes. Her spacing was 0.9 m x 0.30 m (30 cm). The yield was 5 potatoes per plant, weighing an average of 105 g per potato. What was her *total* harvest, in tonnes? Was it reasonable? Support your answer. (4 marks)

- f. Brandon counted 65 paces to walk 50 m. She then measured the field below. What is the area in m^2 and *estimated* in hectares? (5 marks)



- g. Use the conversion method discussed in class to calculate the number of bags of Cpd D needed on the above field if 350 kg/Ha is needed. (2 marks)
- h. Describe the procedure for using LaSota vaccine to vaccinate broilers. (5 marks)

END OF QUESTION 3