



**AFRICA**  
**UNIVERSITY**  
*A United Methodist-Related Institution*

*"Investing in Africa's Future"*

**COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES**

**NACP 113 Practical Agriculture**

**END OF SECOND SEMESTER EXAMINATIONS**

**November 2019**

**LECTURER: Mr Larry Kies**

**DURATION: 3 HOURS**

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### ***INSTRUCTIONS***

1. Do not write your name on the answer sheet

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2. Use Answer Sheets Provided

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3. Begin your answer for Each Question on a New Page

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4. Credit is Given for Neat Presentation

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## ANSWER ALL QUESTIONS.

1. Write the answer only.

- Name the vaccine used to control Gumboro.
- Which disease in broilers results in blood in the droppings?
- When buying day-old broilers, give the advantage of using wood shavings litter instead of sawdust.
- What is the term for a young female chicken?
- Give the best temperature of a brooding house for day-old broilers.

(1 mark each, total 5 marks)

2. A flock of layers 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
28	5096	xxxxxx	765	3	xxxxxxxx	xxxxxxxx
29	5100 <b>a.</b>	xxxxxx	764	1	xxxxxxxx	xxxxxxxx
30	5724 <b>b.</b>	xxxxxx	760	4	xxxxxxxx	xxxxxxxx
31	4563	xxxxxx	<b>c.</b>	2	<b>d.</b>	<b>e.</b>

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 29) is realistic and appropriate for the age of the flock, and justify your answer. (2 marks)
  - State whether the number (**b.**) (Total eggs for week 30) is realistic and appropriate for the age of the flock, and justify your answer. (2 marks)
  - Calculate the value of '**c.**'. (1 mark)
  - Calculate the value of '**d.**'. (1 mark)
  - Calculate the value of '**e.**'. (1 mark)
- Give three signs that a female pig is on heat. (3 marks)
    - Briefly explain the importance of identifying when a female pig is on heat. (2 marks)
  - Layers concentrate costs \$450.00 per 50 kg.  
Maize costs \$120 per 50 kg.

    - Using the correct mixture of 2:3, how much will it cost to make 50 kg of layers mash using the above prices? (1 mark)
    - Use the answer from (a) to calculate the feed cost per dozen eggs when a flock has a 80% laying percentage. Assume 120 g of feed per bird per day. (2 marks)

- c. A farmer can sell her eggs at \$17.00/dozen. Will her project be profitable? Explain. (1 mark)
5. Molly had a broiler project. Her record keeping showed the following:

*Purchased 500 day-old chicks for \$1.60 each.*

*Feed used: Broiler starter mash- 9 x 50 kg bags @\$45 per bag*

*Broiler finisher mash 31 x 50 kg bags @\$42 per bag*

*Medicines- Vaccines- \$45 total*

*Labour- Tatenda- Two months @\$50 per month*

*Casual employees for slaughtering- \$72*

*Joel (security) Two months @\$25 per month*

*Wood shavings- no charge but the transport cost \$25*

*Water and electricity- \$40*

*Plastic bags \$20*

*Sales- 464 dressed birds, total of 654 kg of meat @\$6.00 per kg*

*Offals and heads- \$35.00 total*

- a. Make a table that clearly summarizes the finances of the project. (6 marks)
- b. Calculate the feed conversion ratio of the birds and comment on it. (2 marks)
- c. Calculate the mortality and comment on it. (2 marks)

6. A house of broilers had the following average weights at the ages mentioned:

Age in weeks	0	1	2	3	4	5	6
Mass in g	45	100	210	440	800	1500	2200

- a. Detach the last sheet of this exam (p4, the graph paper). Use this graph paper to draw a graph showing the growth of the birds. Be sure to include the title and axis labels. (3 marks)
- b. Compare the growth of a healthy, well-managed flock with this flock. (1 mark)
7. Write short notes about the term 'cold chain' and how it relates to buying vaccines. (3 marks)

**Practical- To be done outside the lab.**

8. Use the designated scale to give the weights of the objects:

Digital scale: 8a. 8b.

Kitchen scale: 8c 8d

(4 marks)

9. Give the **names** and **briefly** explain the **functions** of the labeled tractor parts/systems:

a.

b.

c.

(6 marks)

10. a. Draw a diagram to indicate the ear notches on the piglet, and give the identification number of the piglet.

(2 marks)

11. Describe the differences between the two chickens and tell why those differences are important. (You may remove the chickens from the cages one at a time if you wish to look at them more closely.)

(5 marks)

12. Estimate the area of the small field marked.

Show all calculations, and give the answer in square meters *and* in hectares.

(5 marks)