



T002

08:30 – 11:30 AM

Names:

Index number

TVET NATIONAL EXAMINATIONS, RTOF LEVEL 5, 2020-2021

QUESTIONS and ANSWERS BOOKLET

OPTION/TRADE: **CROP PRODUCTION**

SUBJECT: Non-Ruminant farming

ACADEMIC YEAR: 2020-2021

Read carefully the instructions on page (i) & (ii).

FOR EXAMINER'S USE ONLY

[illegible]



TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)

1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).
2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.
3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.
4. A candidate should answer in the language in which the examination is set. (See page **(ii)**)
5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).
9. Use the last non-lined pages as draft.
10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

OPTION/TRADE: CROP PRODUCTION

SUBJECT: Non-Ruminant farming

DURATION: 3 hours

INSTRUCTIONS TO CANDIDATES: PART II (Question paper)

The paper is composed of two (2) main Sections as follows:

Section I: Attempt all the Twelve (12) questions (60 marks)

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

Allowed materials:

- Ruler and square
- Calculator

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

01. The eggs could be incubated either naturally or artificially; thus, the success of natural incubation requires a well selected broody hen.

Explain the signs of broodiness.

(5 marks)

02. a. Give the reason why it is not good to feed to non-ruminant animals the leaves of *Leucaena leucocephala*.

(3 marks)

- b. Why can you pay attention while using fish meal in fabrication of concentrate to feed layers hens or broilers?

(2 marks)

03. In poultry house, 450 birds require a floor space of 23 m x 6 m and the standard of windows for proper ventilation must be $\frac{1}{4}$ of the floor area.

- a. Calculate the required area for keeping 1600 birds.

- b. Give the area of windows that will be required for such number of birds.

- c. How many windows that farmer will buy if one window has 1.5 m²?

(5 marks)

04. a) A good palatability of feed increases the intake and digestibility of feed. Explain how the palatability of feed can be improved.

(2 marks)

- b) Complete the table below for crop – livestock interaction.

(3 marks)

Benefits of livestock to crops.	Benefits of crops to livestock.
Livestock are sold to procure crop production input
.....	Provide feed for livestock.
.....	Produce oxygen used by livestock.

05. A Rwanda peasant wishes to practice the rabbit farming although he doesn't know the management of rabbit through housing. What will you advise this citizen about the requirements of a good rabbitry?

(5 marks)

06. Answer by True or False.

(5 marks)

- a. Newcastle is bacterial disease
- b. Gumboro is caused by high stocking density
- c. Proper feeding program is a solution for preventing cannibalism
- d. Pullorum is viral disease
- e. Coccidiosis is parasitic disease

07. In Pig production, different records must be kept for the proper management of the livestock and this requires the adequate pig identification including Ear notching. What is ear notching and how is it performed?

(5 marks)

08. Record keeping is one of the farming parameters that is advised at all levels of the farm production. When you are operating with the poultry farming;

- a. Why is the record keeping important in a poultry enterprise?
- b. What kind of records should be kept in poultry farming? **(5 marks)**

09. Pick out the correct answers:

(5 marks)

- i. Straight feed trough is unique equipment used in poultry feeding.
- ii. It is better to feed poultry using rounded feed trough.
- iii. Both straight and rounded feed troughs are mostly used to feed poultry
- iv. Laying house confines birds from 19th week up the end of laying.
- v. All poultry house for laying hens requires drinkers, feeders, perches, brooding equipment, laying nest, egg handling equipment, and lighting
- vi. All poultry house for laying hens requires drinkers, feeders, and perches (roosts), brooding equipment, eggs handling equipment and laying nest.
- vii. The size of hatchery is based on labors relatively to low cost, availability of surface and possibility of low diseases incidence.

- viii.** The size of hatchery is based on the egg capacity, of setters and hatchers, number of eggs to be set each week and number of chicks to be hatched each week.
- ix.** When designing the poultry shelter, build house in east-west direction, so the chickens are less exposed to direct sunlight.
- x.** When prepare for chicks' arrival, brooder house should be cleaned and disinfected one to two months before.
- 10.** In poultry production, Lighting should be desirable in chickens rearing at several times of day and this varies depending on the basis of the animal growth stage. Explain briefly the effects of lighting in chickens' house. **(5 marks)**
- 11.** Mr Karake would like to begin a project of 1000 laying hens with objective of producing eggs for consumption.
- (a) How many cocks will you advise him to foresee for maximizing profit? Justify your answer. **(3 marks)**
- (b) Why can you pay attention while using fish meal in fabrication of concentrate to feed laying hens or broilers? **(2 marks)**
- 12.** It is less expensive to prevent diseases than to treat them after they have occurred. In your opinion, describe the inexpensive control measures for pig diseases that farmers should adopt. **(5marks)**

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

- 13.** KARAMIRA wishes to start a poultry farm business with 3500 laying chicks with object to produce eggs. He targets the laying rate at an estimate of 83 %, the defective eggs rate at 1.5%, the mortality rate at 1.8% and the selling price of an egg at 75Rwf. Given that the feeding and other intermediate consumptions are retained to 65% of the total farming production. Determine:
- a. The quantity of eggs the farmer would collect within the production year.
 - b. The total revenues of the business.
 - c. The profit of Karamira's business. **(10 marks)**
- 14.** Genetic improvement is one of the methods for livestock production management. What is cross breeding in animal production? Explain different types of cross breeding. **(10 marks)**
- 15.** The rabbit is a total herbivore but is not a ruminant.
- a. Explain briefly the particularity in the digestive system (Anatomy physiology) of the rabbit.
 - b. State the advantage / importance of this particularity to the rabbit digestion.
 - c. Based on the particular digestive system of the rabbit, what can you advise the farmers when feeding the rabbit with grass? **(10 marks)**
- 16.** Pig, Poultry and Rabbit are no-ruminant animals. The feeding of these different species differs according to the specificity of their digestive systems: Discuss on adaptability of feeding system of those animal species basing on the anatomical characteristics of each of above species. **(10 marks)**
- 17.** In poultry farming, give the causes which can contribute to low daily growth and the factors to consider for changing feed. **(10 marks)**
- 18. a)** Pig must be housed and kept in environmental conditions that provide the comfort and to pig. Outline any five (5) considerations for pig comfort and well-being. **(5 marks)**
- b)** Explain how to detect the sow in heat, the ideal moment to be serviced and why. **(5 marks)**

