

[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: ANIMAL HEALTH**

**SUBJECT: Anatomy, Physiology and artificial insemination**

**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.***

**Section I: Attempt all the Twelve (12) questions**

**(60 marks)**

**01.** Define the following terms:

**(5marks)**

- a. Atony
- b. Cardiac notches
- c. Diastema
- d. Pleura
- e. Anatomical landmark

**02.** a) Mention three (3) glands found on male reproductive system.

**(3marks)**

b) Differentiate kidney of cattle from kidney of sheep in terms of morphology.

**(2marks)**

**03.** a) State different classifications of joints.

**(3marks)**

b) What are the common characteristics of the synovial joints?

**(2marks)**

**04.** What are pairs of salivary glands in dogs and goats?

**(5marks)**

**05.** List any five (5) superficial muscles of the neck.

**(5marks)**

**06.** What is the difference between appendicular skeleton and axial skeleton in domestic animals?

**(5marks)**

**07.** a) Mention three (3) types of blood vessels.

**(3marks)**

b) Differentiate Tachycardia from Bradycardia.

**(2marks)**

**08.** The ribs consist of long, curved bones that form the lateral wall of the thorax. Explain types of ribs.

**(5marks)**

**09.** a) The cell is the smallest unit of matter that can carry on all the processes of life, differentiate Eukaryotic from Prokaryotic cells.

**(2marks)**

b) Cell division is the process that results in the multiplication of cells and involves both nuclear and cytoplasmic division. Two types of nuclear, or chromosomal, division are mitosis and meiosis. Differentiate Mitosis from Meiosis.

**(3marks)**

**10.** Sensory receptors within each organ enable it to respond to particular stimuli. What are the five (5) general categories of sensory receptors?

**(5marks)**

11. Choose the correct letter and encircle it

(5marks)

1. ATP stands for:
  - a. Adenousine Triphosphate
  - b. Adenosine Trephosphate
  - c. Adenosin Triphosphate
  - d. No one
2. ATP is mainly produced in the following organelle:
  - a. Mitochondria
  - b. Golgi apparatus
  - c. Ribosome
  - d. ER
  - e. No one of the choice
3. The neurotransmitter is found in the following organelle:
  - a. Mitochondria
  - b. Golgi apparatus
  - c. Ribosome
  - d. Vesicle
4. One among the following is not Source of cell energy
  - a. Oxidative phosphorylation
  - b. Energy from inorganic compounds
  - c. Energy from light
  - d. Energy from ground
5. The neurotransmitter for skeletal muscles is always
  - a. Acetylcholine
  - b. Noradrenaline
  - c. No one
6. Muscular contraction is done in 3 stages in the following sequence:
  - a. Synaptic transmission- Relaxation Coupling- Relaxation cycle
  - b. Synaptic absorption-Contraction Coupling-Relaxation cycle
  - c. Synaptic transmission-Contraction Coupling- Relaxation cycle

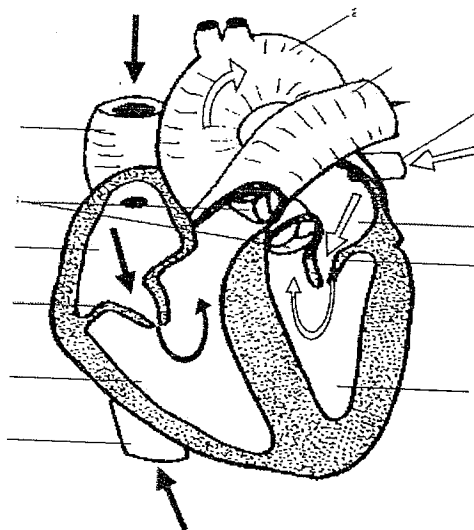
7. The following is the organelle that has 2 sub units:
- a. Nucleus
  - b. Ribosome
  - c. Endoplasmic reticulum
  - d. Vacuole
  - e. None
8. Cytoplasm is composed by:
- a. Cytosol and Organelles
  - b. Cytosol and Cell membrane
  - c. Organelles and Cell membrane
9. Following are signs of Heat in cow, EXCEPT
- a. Dilatation of ovary
  - b. Female receptivity to male
  - c. Mucous discharge
  - d. Restless behavior
  - e. Swollen vulva
10. The following verbs correspond to circulatory system functions EXCEPT:
- a. Control
  - b. Filtrate
  - c. Protect
  - d. Transport
12. Pregnancy diagnosis is very important to female farm animals for breeding efficiency. Give the various methods of assessing the pregnancy status of pregnant cow. **(5marks)**

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

13. Complete the table below by the vertebra or species. (10marks)

	Carnivore	.....	Sheep	Horse	Ox
<b>Cervical</b>	.....	C7	C7	C7	C7
<b>Thoracic</b>	T13	T11-15	.....	.....	.....
<b>Lumber</b>	.....	L6-7	L6-7	L6	L6
<b>Sacral</b>	.....	S4	S4	.....	.....
<b>Caudal</b>	Ca20-24	Ca20-23	.....	Ca15-21	Ca 18-20

14. As veterinarian at sector level, a farmer calls you to help him because he has a sick cow. Describe step by step how you will measure the body temperature and which instrument will be used. (10marks)
15. Give briefly the main steps(procedures) of bull semen processing. (10marks)
16. Fern pattern is a technique used for heat detection. Describe this technique and interpret the results. (10marks)
17. Redraw the diagram below and complete its parts: (10marks)



18. Define what is respiratory rate and give the methods of diagnosing the respiratory rate. (10marks)





