

GWANDA STATE UNIVERGWANDA STATE UNIVERSITY



FACULTY OF NATURAL RESOURCES MANAGEMENT AND AGRICULTURE

DEPARTMENT OF ANIMAL PRODUCTION AND HEALTH

**BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL PRODUCTION AND
HEALTH**

VETERINARY DIAGNOSTICS AND PHARMACOLOGY

NAP2204

FIRST SEMESTER FINAL EXAMINATION PAPER

NOVEMBER 2024 MAIN EXAM

This examination paper consists of 2 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: None
Examiner's Name: Dr L. Maposa

INSTRUCTIONS

1. Answer **all** questions in Section A
2. Answer **two** questions in Section B

MARK ALLOCATION

QUESTION	MARKS
SECTION A	60
SECTION B	40
TOTAL ATTAINABLE MARKS	100

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SECTION A: Answer all questions

- 1a) Describe the procedure for conducting a clinical diagnosis for a cow. **[8 marks]**
- 1b) Describe the procedure for collecting the following samples for laboratory analysis.
- i) Fecal sample **[4 marks]**
 - ii) Milk sample **[4 marks]**
 - iii) Skin sample **[4 marks]**
- 2a) Explain the principles of dose calculation and drug administration in veterinary medicine. **[11 marks]**
- 2b) Discuss the importance of understanding species-specific variations in drug metabolism. **[9 marks]**
- 3a) Describe the process of collecting and preparing samples for hematological analysis in veterinary medicine. **[12 marks]**
- 3b) Discuss common artifacts that can affect the results of a hematological analysis. **[8 marks]**

SECTION B: ANSWER ANY TWO QUESTIONS

- 4) Discuss the regulatory considerations for the use of pharmaceuticals in food-producing animals, including withdrawal times, residue monitoring and consequences of non-compliance. **[20 marks]**
- 5a) Oxytetracycline is a commonly used antibiotic in veterinary medicine, explain its pharmacokinetics and pharmacodynamics. **[14 marks]**
- 5b) Discuss the factors that influence oxytetracycline's absorption, distribution, metabolism, and excretion. **[6 marks]**
- 6) Write notes on the use of the following methods used in veterinary diagnostics, highlighting the strengths, limitations and providing examples of conditions best diagnosed by each modality:
- 6a) Radiography. **[6 marks]**
 - 6b) Ultrasound. **[7 marks]**
 - 6c) Magnetic Resonance Imaging (MRI). **[7 marks]**

END OF EXAMINATION