



**UNIVERSITY OF SWAZILAND**

**2nd SEM. 2015/2016**

**FINAL EXAMINATION PAPER**

**PROGRAMME: BSc. AGRICULTURAL EDUCATION YEAR 3, B.Sc.  
ANIMAL SCIENCE YEAR 3 AND B.Sc. ANIMAL  
SCIENCE (DAIRY OPTION) YEAR 3**

**COURSE CODE: AS 302**

**TITLE OF PAPER: ANIMAL HEALTH**

**TIME ALLOWED: TWO (2) HOURS**

**INSTRUCTIONS: ANSWER FOUR (4) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION 1**

You are put in charge of a cattle farm located at the low veld of Swaziland. Some of the cattle are showing the following clinical signs; Red urine, abortion, constipation, jaundice, pale mucous membrane dyspnoea( difficult breathing) and high fever.

- (a) List all the possible diseases affecting these cattle and justify your selection of possible diseases. **(5 Marks)**
- (b) List and explain all the affected body systems. **(3 Marks)**
- c) Explain how you could reach a definitive diagnosis of each of the possible diseases of the possible diseases. **(6 Marks)**
- d) List the treatment strategy for each of the listed diseases. **(5 Marks)**
- e) Mention preventative and control measures for each of the listed diseases. **(6 Marks)**

**QUESTION 2**

Examine the Haematology results for a cow provided in Table 1 below, and answer the following questions.

**Table 1:**

TEST	RESULT	NORMAL VALUE
RBC Count	$4.10 \times 10^{12}/L$	$5.5 - 8.5 \times 10^{12}/L$
Haemoglobin	13.5 g/dl	12.0 – 18.0 g/dl
Haematocrit	0.39 L/L	0.4 - 0.55 L/L
Neutrophils	$3.32 \times 10^9/L$	$2.0 - 7.5 \times 10^9/L$
Lymphocytes	$2.5 \times 10^9/L$	$1.0 - 4.0 \times 10^9/L$
Easinophils	$0.38 \times 10^9/L$	$0.0 - 0.5 \times 10^9/L$
Platelets	$278 \times 10^9/L$	$150 - 450 \times 10^9/L$



- (i) Write a list of all the possible diseases affecting the sick cow. Prioritise your list. **(5 Marks)**
- (ii) List and explain all the major causes of disease conditions in the cow. **(15 Marks)**
- iii) Describe and explain what is meant by the word Haematocrit. What is the other common name for a Haematocrit **(2 Marks)**
- iv) Describe the procedure for determining the Haematocrit in cattle. **(3 Marks)**

**QUESTION 3**

- (a) Explain how you would differentiate/ determine the definitive diagnosis of the following diseases. **(15 Marks)**
  - i. Foot and Mouth disease and Malignant Catarrhal fever
  - ii. Anthrax and Rabies
  - iii. Bovine Brucellosis and Lumpy Skin disease
- (b) What is chemoprophylaxis? Explain taking into account its importance in stress related situations. **(10 Marks)**

**QUESTION 4**

A farmer reports to you that one of his /her cattle that is off feed (not grazing) and seeks your advice. Describe the steps you would undertake to investigate and reach a definitive diagnosis of the problem affecting the animal. **(25 Marks)**

**QUESTION 5**

Swaziland is currently recognized by the World Organization for Animal Health (OIE) as a country that is Foot and Mouth Disease (FMD) Free Without Vaccination. Discuss the FMD control measures that are currently practiced to prevent an outbreak of the disease in the country. **(25 Marks)**