BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE

AGA 212 [P1]

Department of Animal Science
BSc (Honours) Animal Health and Production Extension
Part 2 Examination
Veterinary Epidemiology

3 HOURS (100 Marks)
INSTRUCTIONS

JUN 2023

Answer any *FOUR* questions. Each question carries **25 marks.**

QUESTION 1

(a) Outline the uses of veterinary epidemiology.   [8 marks]

(b) Write short notes on the following:

(i) Disease monitoring   [5 marks]

(ii) Temporal patterns of diseases   [5 marks]

(c)
(i) List **four** applications of Geographic Information Systems in veterinary medicine.   [4 marks]

(ii) List **three** disease information that can be obtained from an epidemic curve.   [3 marks]

QUESTION 2

(a) Name the **two** types of disease outbreaks.   [2 marks]

(b) For **one** disease outbreak named in (a) above, outline the main steps taken during its investigation.   [8 marks]

(c) Discuss the key features of a disease monitoring and surveillance programme. [15 marks]

QUESTION 3

(a) Discuss the various methods/approaches used to control and prevent diseases in animal populations.   [20 marks]

(b) List **five** applications of rates used to measure the amount of disease.   [5 marks]

(a) State the numerator and denominator of the following:
(i) Prevalence   [2 marks]
(ii) Cumulative incidence   [2 marks]
(iii) Incidence rate   [2 marks]
(iv) Cumulative mortality   [2 marks]
(v) Attack rate   [2 marks]
(vi) Mortality rate   [2 marks]
(vii) Survival rate   [2 marks]

(b) Explain the following terms:
(i) Determinants of a disease   [2 marks]
(ii) Endemic disease   [2 marks]
(iii) Distribution of a disease   [2 marks]
(iv) Disease control   [2 marks]

(c) List **three** uses of maps with respect to animal diseases.   [3 marks]

QUESTION 5

(a)
(i) List **five** notifiable animal diseases in Zimbabwe.   [5 marks]
(ii) Explain the importance of disease notification.   [3 marks]
(iii) Explain the importance of ante- and post-mortem inspection of animals destined for slaughter.   [4 marks]

(b) List **four** different methods for presenting animal disease data and for each method state when it is used.   [8 marks]

(c) Explain the terms contiguous and separated animal populations and their importance with respect to disease transmission.   [5 marks]

QUESTION 6

Write short notes on the following:
(a) Descriptive epidemiology   [5 marks]
(b) Disease prevention   [5 marks]
(c) Secular trends/changes of disease   [5 marks]
(d) Types of disease surveillance   [5 marks]
(e) Types of disease maps   [5 marks]

End of Exam Paper