



**UNIVERSITY OF SWAZILAND**  
**FINAL EXAMINATION PAPER**

**PROGRAMME:** BSc. IN ANIMAL SCIENCE III: BSc. IN ANIMAL SCIENCE (DAIRY OPTION III)

**COURSE CODE:** AS 307

**TITLE OF PAPER:** REPRODUCTIVE PHYSIOLOGY

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

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

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR.**

**QUESTION 1**

- a) Discuss fertilisation and the mechanisms that prevent polyspermy. (15 Marks)
- b) Describe the 'Blood-Testis Barrier', and explain why it is important in reproduction in the male. (10 Marks)

**QUESTION 2**

Describe the events that occur in the different stages of the oestrous cycle and the hormones involved in regulating these changes. (25 Marks)

**QUESTION 3**

Explain how the hypothalamus, anterior pituitary gland, and the gonads communicate in controlling reproduction in both the cow and the bull. (25 Marks)

**QUESTION 4**

- a) Oogenesis is the formation and maturation of the female gamete. Discuss this process in farm animals during the foetal period and after puberty in cattle. (15 Marks)
- b) Describe four (4) characteristics of the scrotum that act in thermoregulation in the testicle. (10 Marks)

**QUESTION 5**

Discuss the components of the male reproductive capacity and explain how these components are affected by other factors. (25 Marks)