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**UNIVERSITY OF SWAZILAND**

**SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMME: BACHELOR OF SCIENCE IN ANIMAL  
SCIENCE III**

**COURSE CODE: AS 307**

**TITLE OF PAPER: REPRODUCTIVE PHYSIOLOGY**

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

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

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

**QUESTION 1**

- a) Discuss mammary gland development from before birth to late pregnancy. What hormones influence this process and what aspects of this developmental process do the hormones influence? (15 marks)
- b) Progesterone maintains pregnancy. Explain in detail how progesterone maintains pregnancy. (10 marks)

**QUESTION 2**

- a) Explain what sperm maturation is and give 4 different examples of physical or biochemical changes that sperm undergo as they mature. (10 marks)
- b) Discuss 5 different factors that can influence the postpartum interval to first estrus.. (15 marks)

**QUESTION 3**

Define spermatogenesis. What are the 3 phases of spermatogenesis and what cell types are produced under each event. Explain the hormonal control of spermatogenesis. (25 marks)

**QUESTION 4**

Discuss breeding management of the bull. (25 marks)

**QUESTION 5**

- a) Define ovulation. Discuss events, hormones and enzymes involved in the process of ovulation in the cow. (15 marks)
- b) How does stress affect reproduction in the bull? (10 marks)