



# NATIONAL OPEN UNIVERSITY OF NIGERIA

## Faculty of Agricultural Sciences

### Department of Animal Science and Fisheries

#### 2025\_2 EXAMINATIONS

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Course: ANP306: Physiology of Animal Reproduction and Growth  
Credit Unit: 2  
Time Allowed: 2 hours.

**INSTRUCTIONS: Answer question one (Compulsory: 30 Marks) and any other TWO (20 marks each)**

#### QUESTION 1

- 1a. Define Artificial Insemination.(2 marks)
  - 1b. List five advantages of Artificial Insemination.(5 marks)
  - 1c. Describe the process of oogenesis.(7 marks)
  - 1d. Describe the main stages of the estrous cycle in cattle.(16 marks)
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#### QUESTION 2

- 2a. Identify the environmental factors that affect lactation in dairy cattle.(5 marks)
  - 2b. List and briefly explain the functions of three key hormones involved in the regulation of reproduction in female mammals.(15 marks)
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#### QUESTION 3

- 3a. Describe the neuroendocrine regulation of lactation in livestock.(5 marks)
  - 3b. Explain the roles of the hypothalamus and pituitary gland in the process described above (3a). (5 marks)
  - 3c. Discuss the effects of oxytocin on milk ejection.(5 marks)
  - 3d. Describe the stages of spermatogenesis in bulls.(5 marks)
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#### QUESTION 4

- 4a. Define spermatogenesis and outline the main stages involved in this process.(8 marks)
  - 4b. Explain the function of Sertoli cells in spermatogenesis. (6 marks)
  - 4c. Discuss the differences in cognitive functions between vertebrates and invertebrates. (6 marks)
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