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**UNIVERSITY OF SWAZILAND  
SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMME** : **DIPLOMA IN AGRICULTURE YEAR I,  
DIPLOMA IN AGRICULTURAL  
EDUCATION YEAR I, DIPLOMA IN HOME  
ECONOMICS YEAR I AND DIPLOMA IN  
HOME ECONOMICS EDUCATION YEAR I**

**COURSE CODE** : **APH 101**

**TITLE OF PAPER** : **ZOOLOGY**

**TIME ALLOWED** : **TWO HOURS**

**INSTRUCTIONS** : **ANSWER ANY FOUR QUESTIONS**

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

**QUESTION ONE**

- a. Give an account of the characteristics of living organisms. (10 Marks)
- b. Explain the autotrophic and heterotrophic types of feeding and indicate the type of living organisms carrying out each of these types of feeding. (5 Marks)
- c. Describe how the grouping and naming of living organisms are carried out in the process of classification. (10 Marks)

**QUESTION TWO**

- a. Name the three (3) main parts of an animal cell. (5 Marks).
- b. List the cytoplasmic organelles found in an animal cell and indicate the functions of each of these organelles. (15 Marks)
- c. Explain the relationships among the functions of these organelles. (5 Marks)

**QUESTION THREE**

Describe the process of protein synthesis indicating the roles of deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) in this process. (25 Marks)

**QUESTION FOUR**

- a. Describe the process of ova genesis in a ewe with 54 diploid numbers of chromosomes. (20 Marks)
- b. Indicate the differences between ova genesis and spermatogenesis as occurs in sheep. (5 Marks)

**QUESTION FIVE**

- a. Using the cell as the unit of the structure of the body of farm animals, indicate how the animal body is organized. (5 Marks)
- b. List the types of epithelial tissue found in the bodies of farm animals. (10 Marks)
- c. Describe the structure of a typical tubular organ found in the bodies of farm animals. (10 Marks)

**QUESTION SIX**

- a. Describe how glands develop and indicate the main difference (s) between an exocrine gland and an endocrine gland. (15 Marks)
- b. List the five (5) hormones secreted by the anterior pituitary gland and indicate the function (s) of each of these hormones. (10 Marks)