

2ND SEMESTER 2008/2009



PAGE 1 OF 3

**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

PROGRAMME : ALL B. SC. YEAR I

COURSE CODE : APH 101

TITTLE OF PAPER : ZOOLOGY

TIME ALLOWED : TWO HOURS

INSTRUCTIONS : ANSWER ANY FOUR QUESTIONS

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GRANTED BY THE CHIEF INVIGILATOR**

QUESTION ONE

- a. Explain the difference (s) between a plant and an animal.
(5 Marks)
- b. Describe how grouping and naming of living organisms are carried out in the process of classification.
(10 Marks)
- c. Describe the characteristics of each of the following classes of vertebrate animals.
 - i. Pisces
 - ii. Amphibia
 - iii. Reptalia
 - iv. Aves
 - v. Mammalia(10 Marks)

QUESTION TWO

- a. Explain how natural selection and artificial selection have contributed to the process of evolution.
(10 Marks)
- b. Show how each of the following phenomena act as evidence to the process of evolution of animals.
 - i. Distribution studies
 - ii. Continental drift
 - iii. Embryological development of the vertebrate heart and the arterial arches.(15 Marks)

QUESTION THREE

- a. Describe the chemical structure of deoxyribonucleic acid (DNA).
(10 Marks)
- b. Describe the process of protein synthesis and explain the role played by the DNA in this process and the consequences of the inadequate availability of an essential amino acid during the process.
(15 Marks)

QUESTION FOUR

Describe the process of meiosis in a buck with 60 diploid numbers of chromosomes and explain the role played by this process during the production of spermatozoa.
(25)

QUESTION FIVE

- a. List the eight (8) types of epithelial tissue (epithelium) indicating the location and function of each of these types in the bodies of farm animals.
(15 Marks)
- b. Describe the structure of a typical tubular organ 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 (adeno-phypophysis) and then indicate the function (s) of each of these hormones.
(10 Marks)