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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY 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. Describe the divergent type of evolution and using an example of either the Galapagos Finches or the Pentadactyl Limb explain how this type of evolution leads to adaptive radiation. (15 Marks)
- b. Describe the role played by artificial selection in evolution. (10 Marks)

QUESTION TWO

- a. Describe the chemical structure of deoxyribonucleic acid (DNA). (10 Marks)
- b. Describe how the genetic information is carried on the DNA molecule and how this information is transferred to messenger ribonucleic acid (mRNA) indicating the objective (s) of this transfer. (15 Marks)

QUESTION THREE

- a. Describe the structure of bone tissue and give the differences between the structure of this tissue and that of cartilage tissue. (10 Marks)
- b. Describe and compare the structures of typical tubular organs and compact organs. (15 Marks)

QUESTION FOUR

Give an account of the types of exocrine glands. (25 Marks)

QUESTION FIVE

Describe the process of meiosis in sheep with 54 diploid numbers of chromosomes indicating the objectives of this process and how it achieves these objectives. (20 Marks)

QUESTION SIX

Explain what is involved during the process of gametogenesis. (25 Marks)