



2nd SEMESTER 2010/2011

PAGE 1 OF 2

**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

PROGRAMME : ALL B.SC. YEAR I

COURSE CODE : AS 101

TITLE OF PAPER : ZOOLOGY

TIME ALLOWED : TWO HOURS

INSTRUCTIONS : ANSWER ANY FOUR QUESTIONS

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GRANTED BY THE CHIEF INVIGILATOR**

QUESTION ONE

Compare between:

- a) Simple diffusion and Facilitated diffusion (5 Marks)
- b) Phagocytosis and Pinocytosis (5 Marks)
- c) Messenger RNA and Transfer RNA (5 Marks)
- d) Inversion and Duplication chromosome mutations (5 Marks)
- e) Creation and Lamarck's phenomena (5 Marks)

QUESTION TWO

Draw and label the structure of the following:

- a) Animal cell (5 Marks)
- b) Compact organ (5 Marks)
- c) Avian oviduct (5 Marks)
- d) Neuron (5 Marks)
- e) Skeletal muscle (5 Marks)

QUESTION THREE

- a) Give an account of the characteristics of living organisms (10 Marks)
- b) List the types of epithelial tissue found in the bodies of farm animals (8 Marks)
- c) Describe the chemical structure of deoxyribonucleic acid (DNA) (7 Marks)

QUESTION FOUR

Draw and label the difference between meiosis and mitosis methods of cell division (25 Marks)

QUESTION FIVE

Indicate the function (s) of each of the following:

- a) Prolactin (5 Marks)
- b) Follicular Stimulating Hormone (FSH) (5 Marks)
- c) Oxytocin (5 Marks)
- d) Adeno-Cortico-Tropic Hormone (ACTH) (5 Marks)
- e) Somatotropic Hormone (5 Marks)

QUESTION SIX

- a) Describe the composition and function (s) of blood tissue (10 Marks)
- b) Describe, with the aid of a labelled diagrams the embryological development of the vertebrate heart and arterial arches as evidence of evolution (15 Marks)