

**UNIVERSITY OF SWAZILAND**

**RESIT EXAMINATION PAPER 2016**

**TITLE OF PAPER : INTRODUCTORY ZOOLOGY**

**COURSE CODE : BIO102**

**TIME ALLOWED : THREE HOURS**

**INSTRUCTIONS :**

1. ANSWER ANY TWO (2) QUESTIONS FROM EACH SECTION
2. USE ONE (1) ANSWER BOOKLET FOR EACH SECTION
3. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS
4. WHEREVER POSSIBLE ILLUSTRATE YOUR ANSWERS WITH LARGE CLEARLY LABELLED DIAGRAMS

**SPECIAL REQUIREMENTS: NONE**

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN**

**GRANTED BY THE INVIGILATORS**

SECTION A

QUESTION 1

Describe with the aid of a web diagram, how food (energy and nutrients) is transferred from the abiotic environment to the biotic community of an ecosystem. What eventually happens to the energy? What eventually happens to the nutrients?

[Total marks = 25]

QUESTION 2

a) Define the following terms:

- i. Niche (3)
- ii. Ecosystem (2)
- iii. Mutualism (2)
- iv. Trophic level (2)
- v. Parasitoid (3)
- vi. Ectothermy (3)

b. What is a mutation? Discuss in detail the importance of these in evolution. (10)

[Total marks = 25]

QUESTION 3

a. Distinguish between the following:

Biosphere, community, ecosystem and biome (15)

b) Distinguish between three groups of mammals, i.e. the Monotremes, Marsupials, and Placentals, in terms of provisioning and development of their young. (10)

[Total marks = 25]

**SECTION B**

**QUESTION 4.**

Write notes on the following:

- i) Urine formation
- ii) Functions of blood
- iii) Hepatic portal vein

(10 Marks)  
(10 Marks)  
(5 Marks)  
[Total Marks = 25]

**QUESTION 5.**

What role is played by hormones in human digestion?

[Total Marks = 25]

**QUESTION 6.**

Write notes on the following:

- i) Surfactants
- ii) Respiration in *Anguilla vulgaris*
- iii) Diffusion lung
- iv) Regulation of respiration

(4 Marks)  
(8 Marks)  
(5 Marks)  
(8 Marks)  
[Total Marks = 25]