

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

**FACULTY OF APPLIED SCIENCES
DEPARTMENT OF FOREST RESOURCES AND WILDLIFE MANAGEMENT
BACHELOR OF SCIENCE HONOURS DEGREE
MAIN EXAMINATION**

WILDLIFE NUTRITION: EFW 2105

January 2013

Time Allowed: 3 Hours

Total Marks: 100

INSTRUCTIONS TO CANDIDATES:

Answer **QUESTION ONE** and any **THREE** others. Each question carries **25 marks**.

1. (a) In the formula $M = aW^b$, $a = 78$ and $b = 0.723$ for large non-passerine birds. Make a database for M and for kcal/day/kg of the following birds:

Greenshank	50g	Black Duck	1kg
Red-billed Hornbill	125g	Grey Heron	1.50kg
Grey Lourie	230g	Tawny Eagle	2kg
Rock Pigeon	350g	Lesser Flamingo	2.5kg
Yellow-billed Kite	450g	Kori Bustard (f)	5kg
Reed Cormorant	500g	White Pelican (m)	11kg

[12 marks]

- (b) Graph M against W (arithmetic paper) and fit a line.

[9 marks]

- (c) Define the terms and their units in $M = aW^b$

[4 marks]

2. Write explanatory notes on the following-

- (a) Rumination by a named mammal.

[10 marks]

- (b) Foraging and feeding by a named scavenging bird.

[10 marks]

- (c) Feeding by a giraffe.

[5 marks]

3. (a) With illustrations, describe the four types of teeth in a non-human mammal.

[12 marks]

- (b) With an illustration, describe the beak of a Pied Cow.

[8 marks]

- (c) List the functions of a bird's beak.

[5 marks]

4. (a) Write an essay on proteins. **[15 marks]**
- (b) Explain the source of proteins in a named mammalian carnivore, and a named mammalian herbivore. **[4 marks]**
- (c) State the average composition of red meat, and the calorific content of 100g of red meat. **[6 marks]**
5. (a) With the aid of diagrams, describe the alimentary canals of a named non-ruminant mammal, and a named herbivorous bird. **[20 marks]**
- (b) Note any five differences between the animals in 5 (a). **[5 marks]**
6. (a) Noting any unique features, and with the aid of illustrations, describe the teeth of the African elephant, and explain their use in feeding. **[12 marks]**
- (b) Explain the use of teeth in estimating the age of the Africa Elephant. **[6 marks]**
- (c) Briefly describe the wet season and dry season average diets of an elephant in Zimbabwe. **[7 marks]**

***** END OF PAPER *****

