

**NATIONAL UNIVERSITY OF LESOTHO**  
**FACULTY OF AGRICULTURE**  
**DEPARTMENT OF ANIMAL SCIENCE**  
**B.Sc. AGRICULTURE (ANIMAL SCIENCE)**  
**SECOND SEMESTER EXAMINATION**  
**ANS3510: FRESH WATER AQUACULTURE**

**JUNE 2023**

**MARKS: 100**

**TIME: 3:00 HRS**

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**INSTRUCTIONS:**

Answer all questions.

Start every question on a new page.

Points should be bulleted.

### **Question 1**

Differentiate between the following terms (2 marks each)

- a) Oviparity and Viviparity
- b) Aquaponics and hydroponics
- c) Maturation pond and facultative pond
- d) Spawning and cryopreservation
- e) Fry and brood stock

### **Question 2**

Mr. Shoe is living in a village near a flowing stream while Mr. Fish is situated in rocky areas where there is plenty water nearby.

- i. In these scenarios, which farming facilities will you encourage these prospective fish farmers to use and why? (5 marks)
- ii. Which species and feeding practices will you recommend them to use and why? (10 marks)

### **Question 3**

- a) Describe Integrated Agriculture Aquaculture with examples where possible (10 marks)
- b) What are the factors to consider during cage establishment in a water body? (10 marks)
- c) What are the characteristics of an ideal tank for fish production? (5 marks)

### **Question 4**

Discuss the following pre-stocking management practices in the rearing pond. (10 marks each)

- a) Control of aquatic weeds.
- b) Pond drying and ploughing.

### **Question 5**

- a) Describe five factors that affect breeding season in fish (10 marks)

- b) Discuss sexual maturity in female fish (10 marks)

**Question 6**

Describe the characteristics of the following cultivable fish species in Lesotho (5 marks each)

- a) Trout species.
- b) Common carp species.