UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: B.SC AG.ED YEAR IV, B.SC LWM YEAR IV & B.SC AN.SCI
YEAR IV

COURSE CODE: APH 405

TITLE OF PAPER: FISH FARMING

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER FOUR (4) QUESTIONS

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CHIEF INVIGILATOR

QUESTION 1
For fish farming, we should understand the fish physiology.
    A) Explain the concept, **counter-current diffusion system**   (12.5 points)
    B) Explain the osmoregulation mechanisms in fresh water species   (12.5 points)

QUESTION 2
    A) Explain in details the reproduction of tilapia species (genus *Oreochromis*). (25.0 points)

QUESTION 3
Fish nutrition. Write short notes on:
    A) Pond liming   (8.0 points)
    B) Animal protein sources for fish feed   (9.0 points)
    C) Mineral requirements for fish   (8.0 points)

QUESTION 4
Pond management and fish environment. Write short notes on:
    A) Fish kills   (8.0 points)
    B) Animal damage of the ponds   (8.0 points)
    C) pH tolerance for *Oreochromis niloticus*   (9.0 points)

QUESTION 5
Fish preservation refers specifically to the processing techniques that are used to keep food from spoiling. Explain in detail the smoking fish methods.   (25.0 points).