

MAASAI MARA UNIVERSITY REGULAR UNIVERSITY EXAMINATIONS 2024/2025 ACADEMIC YEAR SECOND YEAR SECOND SEMESTER

SCHOOL OF NATURAL RESOURCES, ENVIRONEMNTAL STUDIES AND AGRICULTURE BACHELOR OF SCIENCE IN ANIMAL HEALTH AND PRODUCTION

COURSE CODE: AHP 2204-1 COURSE TITLE: AQUACULTURE

DATE: 19/4/24 TIME: 0830-1030HRS

INSTRUCTIONS TO CANDIDATES Answer **ALL** questions

This paper consists of 2 printed pages. Please turn over

1		Describe the benefits of using tanks (as opposed to open water culture)
		for intensive production of finfish. (20 marks)
2		Describe and illustrate two waste water management technologies
		commonly used in land-based production systems. (20 marks)
3	а	List two benefits of polyculture. (4 marks)
	b	With the aid of a diagram, describe what happens to the carbon dioxide
		levels over a 24-hour period in a freshwater production pond that
		contains aquatic plants and algae. (8 marks)
	C	Discuss why the food conversion levels are lower in aquatic cultured
		organisms compared to terrestrial farmed organisms such as pigs and
		sheep. (8 marks)
		Describe hatchery culture of fish, including the protocols used for
		broodstock conditioning, spawning and larval rearing. (20 marks)
4	а	Discuss the use of antioxidants in fish. (5 marks)
	b	What does the biological oxygen demand measure? (5 marks)
	C	Under what conditions would you expect the BOD to increase.
		(5 marks)
	d	State five (5) favourable biological traits when considering a suitable
		new aquaculture species. (5 marks)
5	а	Draw and label a three-triangle diagram which illustrates the main
		types of aquacultures and the proportional inputs into each type.
		(15 marks)
	b	Describe the procedure involved in hormonal manipulation of fish.
		(5 marks)
6		Describe the risks associated with aquaculture and their
		management/mitigation approaches. (20 marks)

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