

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	a	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	a	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	a	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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