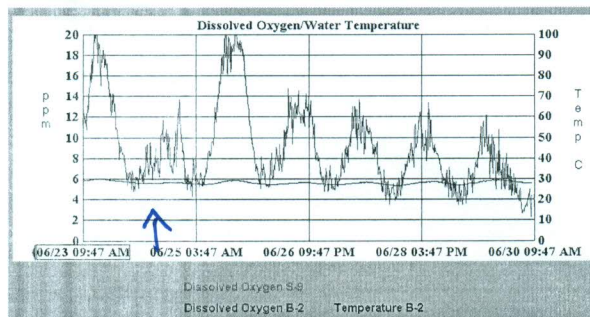


Exam 2  
Aquaculture Production  
January 7, 2011

Name: \_\_\_\_\_

All answers are worth 3 points unless otherwise indicated.

- Which of the following feeds will give the maximum growth for fish grown in cages?  
a) **floating complete** b) sinking complete c) supplemental d) natural e) powdered
- True or **False**: When feeding a fish that requires a 32% protein feed, any 32% protein feed will provide maximum growth.
- Which of the following conditions will lead to a higher rate of metabolism (higher oxygen consumption)?  
a) Cool water temperatures  
b) Larger fish  
c) **Higher fish activity**  
d) No feed  
e) Oxygen saturation
- A farmer sells his/her fish for \$1.50/kg. The cost of the feed is \$0.55/kg. Based upon the rough estimate used to determine cost-effectiveness, will the farmer make any profit?
- Which of the following can provide supersaturated levels of dissolved oxygen?  
a) paddlewheel b) diffused air c) aspirator d) vertical pump sprayer e) **none of these**
- In large ponds, which of the following is best for adding oxygen and circulating water?  
a) **paddlewheel** b) diffused air c) aspirator d) vertical pump sprayer e) vertical aerator
- In the following graph, what is NOT a likely cause of the low level of dissolved oxygen on the **second** day?



- rain
- heavy overcast (clouds)
- aeration
- phytoplankton die-off**
- storm

8. Which of the following species would have the maximum feeding rate in ponds with no aeration?
- a) Channel catfish
  - b) Rainbow trout
  - c) tilapia
  - d) **tra catfish**
  - e) largemouth bass
9. Which of the following species had the highest market price?
- a) Snakehead
  - b) Freshwater Eel
  - c) Tilapia
  - d) Tra catfish
  - e) **Freshwater prawn**
10. What is the maximum amount of tra catfish processed daily by the Thuan Hung Company?
- a) 10 mt/day
  - b) 40 mt/day
  - c) **100 mt/day**
  - d) 200 mt/day
  - e) 300 mt/day
11. What is the main product produced by the Thuan Hung Company? **Frozen fillets**
12. How are tra catfish fingerlings transported from the hatchery to the farm and then to ponds? **By boat to the farm and then by motorbike in baskets with no water**
13. What is the average production (MT/pond) for the tra catfish farm? **65-70 MT/pond**
14. Which of the following fertilizers are used on the tra ponds at the Thuan Hung Company?
- a) TSP
  - b) urea
  - c) 10-20-0
  - d) 10-10-10
  - e) **None of the above**
15. For the tra catfish farm, how is the type of feed adjusted as the fish grows? **They increase the feed size while decreasing the % protein in the feed.**
16. (5 pts) Briefly explain how the Thuan Hung Company got water from the main river into the tra catfish ponds and then how the water was processed before discharging (after harvest). **Water came from river by canal on both ends of the farm and was pumped into the fill canal to gravity feed into ponds. Water was drained by pipe in lower**



section of pond into canal and run through water hyacinth ponds to 'process' water before discharging.

17. (5 pts) If the tra catfish ponds are stocked at 350,000 fingerlings/ha and the final harvest weight is 0.9 kg with a final standing crop of 260 MT/ha, what is the average survival rate for the ponds?
- a) 17.5%
  - b) 65.4 %
  - c) 74.3 %
  - d) **82.5%**
  - e) None of the above
18. (5 pts) Briefly describe pond management at the prawn farm, including pond preparation and water quality control. You do NOT have to give exact amounts used, just the things used and the timing of them. **Rice stubble is burnt and the pond flushed several times. Pond is then limed and filled. 50% of water is exchanged once weekly.**
19. (5 pts) Briefly describe how the farmer feeds his freshwater prawns, including what he feeds and how he determines if they are eating all the feed or if he is overfeeding. **He feeds a commercial shrimp feed and golden snails or trash fish. He spreads the feed evenly around the pond two to three times/day. He places feed in 4-5 feeding trays and checks after 1-2 hours.**
20. (5 pts) Briefly describe how the prawns are transported to market. **Placed into containers with water and oxygen and transported by motorbike.**
21. (5 pts) Briefly describe how the farmer feeds his snakehead in the tanks, including what he feeds and how he determines if they are eating all the feed or if he is overfeeding. **He feeds a commercial feed and trash fish, depending upon the cost of trash fish. He places feed in feeding trays and monitors to see if they are eating it all.**
22. (5 pts) How are the snakehead fingerlings transported and how does adjust this by size of fingerling? **They transport in plastic bags with water and decrease the number for larger fingerlings.**
23. (5 pts) Briefly describe how the farmer manages water quality for the freshwater eels. **He exchanges water daily and uses formalin when incoming water is poor.**
24. (5 pts) Briefly describe the feed the farmer feeds his freshwater eels and how often. **He feeds a combination of golden snails, river clams or mussels and trash fish which are ground and mixed with vitamin C and an enzyme. He feed once daily in late afternoon.**
25. (2 pts) Why does the tilapia cage farmer get lower survival during the dry season? **Because water flow decreases, they have problems with warmer temperatures and lower dissolved oxygen levels.**
26. (3 pts) How does the tilapia cage farmer increase oxygen in the cages? **They run their boats close to the nets to mix the water and air with the motor.**

27. (5 pts) Briefly describe how tilapia are harvested from the cages and transported to market. **Cage netting is pulled up and fish removed and placed in barrels with water and air lines. They are transported by boat and then truck.**

**BONUS:**

28. (3 pts) What was your favorite part of the class?