(19)

Roll No								

B.E./ B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/ MAY 2011

AGRICULTURAL ENGINEERING BRANCH

FIFTH SEMESTER

AI 9304 – AQUACULTURE ENGINEERING

(REGULATIONS 2008)

Time: 3 hr Max Mark: 100

Answer ALL Questions

Part – A (10x 2 = 20 marks)

1. What is the significance of pond mixing?
2. How pH is maintained in aquaculture farms?
3. What are the machineries and equipments used in aquaculture?
4. Why bleaching powder is not recommended for eradicating undesirable fish in aquaculture farms?
5. Write any two bacterial diseases and the causative organisms affecting fish
6. Why manuring is done in aquaculture? What are the manures normally used?
7. Integrated fish farming serves as a model for sustainable development. Why?
8. Calculate the ammonia load produced by 4500 striped bass fingerlings each weighing 75g, if an average of 40mg ammonia is produced for every 100g of fish in tank.
9. What are the advantages of Recirculation System of aquaculture?
10. Write about Coastal Aquaculture Act

Part – B (5 x 16 = 80 marks)

11. a. Explain the different aquaculture systems. Write in detail the important parameters to be considered while starting an aquaculture farm

12. a. Write elaborate notes on pond management in fish culture.

or

b. Write the steps involved in HAPA method of fingerling production

Your target is to produce 8,000 fingerling for a grow-out pond. How many HAPA and brood stock will you need?

13. a. What is integrated aquaculture farming? Explain the ecological and economic benefits derived from it

or

b. Explain how environment is degraded by aquaculture. Explain with a case study

14. a. List the various infrastructure facilities required for aquaculture farms. What are the various programmes and aquaculture development goals?

or

b. The size of the aquaculture farm is playing a major role in productivity.

Substantiate your answer

15. a. Explain the different types of aerators? Explain how nitrate and ammonia in aquaculture systems is managed?

or

b. What is cage system of aquaculture? Explain how water quality is managed in it

From the following data calculate the Feed Conversion Ratio (FCR) in a cage culture

Sl. No.	Particulars	Value/Quantity
1.	Size of Net Cage	5x5x5 m
2.	Total number of net cages/module	06
3.	Stocking rate/net cage	800 pieces
4.	Cultured period	6 – 7 months
5.	Survival rate	90%
6.	Average body weight at harvest	600g
7.	Quantity of feed	6000Kg