Uva Wellassa University of Sri Lanka
Faculty of Animal Science & Export Agriculture
BSc in Aquatic Resources Technology Degree Programme

Year II Semester II
End Semester Examination - August / September 2011

AQT 224-2Farm Designing and Construction

Essay Questions (Section II)

Instructions
Answer **02 questions including question no 01** in booklets provided..
No. of questions : Three (3)
No. of pages : Two (02)
Time : One hour (1hr)
Total marks allocated : 60%

01) You have been asked to construct a pond farm with 10 grow out ponds at a certain site at Sooriyawewa DS division in Hambantota district. This site is an abundant flat land having surface area of 06 Acres. Soil type is sandy loam and top soil layer contains a high amount of organic matters. This area is somewhat dry and less annual rain fall can be observed. Water can be obtained by gravity flow to your farm continuously from a nearby perennial tank and this tank has a sluice gate to release water. It takes 06 seconds to fill a 100 L container from this water source. (1000 L = 1 m^3)

Hints – each pond should be constructed with 1.5 m average depth, 20 m width, 30 m length and recommended to leave 0.5 m as freeboard.

(I) Identify one disadvantage of the proposed site and briefly describe method/s to overcome the problem you identified.

(II) Imagine it is required to fill all the ponds simultaneously and answer following questions

(a) Calculate the total water requirement to fill all the ponds

(b) Calculate the velocity (L per minute) of water released from the sluice gate

(c) Calculate how many days it will take to fill all the ponds.

(III) Briefly describe inlet and outlet types that should be installed in this pond farm and installation procedures.

(30 marks)

02) (a) "Cage culture farms have several advantages compared to the pond culture farms" **critically evaluate this statement.**

(b) Write short notes on **(limit the answer to 150 words for each)**

(i) Site selection for cage culture

(ii) Cage designing

(30 marks)

04) Write an essay on farm management practices.

(30 marks)