PG/IVS/AMT-2402/10

M.Sc. 4th Semester Examination, 2010

AQUACULTURE MANAGEMENT & TECHNOLOGY

(*Food Safety and Quality Assurance*)

PAPER—AMT-2402

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any *four* of the following questions : 2×4

(*a*) Differentiate between quality inspection and quality verification.

(*b*) What is rigor mortis ?

(*c*) State the demerits of rancidity .

(*d*) How much Latent Heat(LH) is present in 50 kg ice block ?

(*e*) State the principles of plate freezing.

(*f*) What do you mean by spoilage indices ?

(*g*) Define drip loss.

(*h*) What are Psychrophilic bacteria and Mesophilic bacteria ?

2. Answer any *four* of the following : 4 × 4

(*a*) Differentiate between conductive and non-conductive thawing.

(*b*) Narrate the action of bacteria on the chemical changes in fish during spoilage.

(*c*) State the factors affecting freezing time of fish.

(*d*) Write the characteristic features of packaging materials required for frozen fish.

(*e*) What are the precautions to be taken for maintaining hygienic conditions in a processing plant ?

(*f*) Briefly describe the different types of ice to be used in fish preservation.

(*g*) Discuss the various National Standards used in fishery products.

(*h*) Briefly elucidate the method of Gram Staining.

3. Answer any *two* of the following questions : 8 × 2

(*a*) What are the different types of changes associated with freezing and cold storage ? Add a note on transportation of fresh fish. 5 + 3

(*b*) What is cryogenic freezing ? Discuss cryogenic freezing process by using liquid nitrogen. What are the advantages of contact plate freezing techniques ? 2 + 4 + 2

(*c*) Give an account on the post mortem biochemical changes in fish. 8

(*d*) Write notes on : 2 × 4

(*i*) Fish handling

(*ii*) Rancidification

(*iii*) Microbes of processed fish

(*iv*) TMA.