PREFACE
Fish culture in recent years have become popular due to increasing fish demand in day-to-day life. In India due to scarcity of animal proteins like meat, egg and milk, fish occupies a major position in solving food problem. Our inland water resources can be efficiently utilised to develop pisciculture for growing more fish in a short span of time. Major carps like Catla, Rohu and Mrigala have been considered to be fast growing fishes in terms of total fish in return. But these fish fail to breed in confined water-bodies of ponds and lakes. They breed in lentic water system in riverine condition during monsoon where other undesirable varieties also breed. Selecting out the spawns of major carps at this stage is very difficult. So to get a pure varieties of spawns of major carps for pisciculture, induced breeding techniques in lentic water have been adopted by different fish farms. When fish culture is done in a suitable environment by scientific techniques, it helps a lot for high yield.

We have worked out in Sambalpur fish farm as regards the ecological conditions and on pisciculture of major carps, like Catla, Rohu and Mrigala with special attention on hypophysation and have tried to find out the pros and cons of their method along with few suggestions which will improve the pisciculture techniques.
First part of the thesis comprises General geography, metrological units, Physiography of fish ponds, which put forth the topography as well as climate of Sambalpur Fish Farm as a part and Sambalpur as a whole.

Part II of the present dissertation fills the seasonal rhythm which includes physico-chemical parameters, primary productivity and plankton analysis of the fishery ponds. Since these claim to be the co-factors of food chain or food-web system in any aquatic ecosystem.

The last part of the Part II deals with the circadian rhythm, which brings before us how the organisms are well regulated through inter-relationships of abiotic and biotic factors. In fact, above all "Biological clock or Circadian rhythm" plays a vital role in bringing about successful routine life of all aquatic organisms.

In part-III chapter, a great attempt has been made to bring about statistical correlation among per cent fertilization, per cent hatchling and sex ratio (Male:Female) of three major carps. This is most essential chapter dealing with the present demand of hypophysation. Certain data of this chapter in fact fills up the long gap left in the past in the education of hypophysation.

Finally, the last chapter, Part IV, "Pisciculture" mostly deals with the both merits and demerits of the present fish farm. Also, certain precautionary measures such as eradication of predatory fishes, construction of fish pond etc. have been mentioned in a very simple but scientific manner.