APPENDIX I

SCHEME AND SYLLABUS OF EXAMINATION FOR THE PURPOSE OF FILLING THE POST OF FISHERIES BLOCK OFFICER UNDER SIKKIM STATE SUB- ORDINATE FISHERIES SERVICE:

The competitive examination shall comprise of two stages: 1. Physical Endurance Test, and 2. Main (written) Examination.

Stage 1: Physical Endurance Test (PET):

1. All candidates have to appear in the Physical Endurance Test.
2. The candidates should possess the following physical standards:
   - i. Height: 155cm
   - ii. Chest girth: 84cm
   - iii. Chest expansion: 90cm
     (Note: Physical fitness to be certified by the Medical Board)
   - iv. Should be able to walk a distance of 25 Kms within 4 hrs.
3. The Sikkim Public Service Commission shall draw a merit list of those candidates who have qualified the PET to call for appearing in the main written examination.

Stage 2: Main (written Examination):

The mode of examination and setting – up of question – papers shall be both objective MCQs and Conventional types. The candidates are required to answer the objective type MCQs in the OMR Sheets and are required to follow the guidelines provided in the OMR Sheet while answering the questions.

The examination consist of 2 papers:-

PAPERS	SUBJECT	FULL MARKS	TIME ALLOWED
PAPER-I	General English	50	1:00 hours
	General Knowledge	30	
PAPER-II	Fisheries	100	2:00 hours

1. SYLLABUS

PAPER-I: GENERAL ENGLISH

The question will be designed to test the candidate's understanding and command of the English language. The patterns of questions would be broadly as follows:-

1) Comprehension of given passage.
2) Grammar.
3) Usages and Vocabulary.
4) Report Writing, Essay Writing and Precis Writing

General knowledge: Knowledge of current events of local, National and International importance.

PAPER-II: FISHERIES

UNIT-I: Classification and taxonomical characteristics of cultivable fisheries, crustaceans and molluscs. Fresh water, brackish water and marine fishery resources of India, Estuarine, lacustrine, brackish waterand pond ecosystem. Population dynamics, fish stock, abundance methods and analysis. Conservationand management of fishery resources. Fisheries legislations and law of the Seas. Impact of overexploitation and climate change on fisheries resources.

UNIT-II: Reproduction and breeding behaviour in fishes and shellfishes, brood stock improvement, maturity and fecundity studies. Induced spawning methods and seed production, natural fish seedcollection and rearing methods. Types of eggs and development of larval stages of fin fishes andshellfishes. Preparation and management of fresh water and brackish water fishponds. Cultivablespecies identification, introduction of exotic fishes in India.Basic aspects of biotechnology in relation tofisheries.

UNIT-III: Important limnological and biological parameters in relation to fisheries of lotic and lentic waters, biological productivity and its impact on fisheries. Environmental impact assessment on fisheries in lentic and lotic waters. Biological parameters including energy flow, community ecology and aquatic association, biodiversity and its conservation, aquatic pollution and its management.

UNIT-IV: Common crafts and gears used for fish capture. Boat building material and demerits of wood,steel, aluminum, Ferro cement and FRP. Different types of fibres and netting materials and their characteristics, preservation of netting, parts of a trammel net, purse-scene, gill net and tuna long line.Food chemistry, fundamentals of microbiology. General methods of fish preservation and fishery byproducts. Canning and packaging techniques, processing and product development techniques.

UNIT-V: Introduction to fishery economics and concepts of cooperative, marketing and banking management. Supply v/s demand economics of hatchery management and fish culture operations. Profit maximization. Problems in estimating costs and returns in fisheries. WTO agreements in Fisheries sector, intellectual property rights (IPR) and international fish trade; Fisheries extension methods. Training and education needs in fisheries. Communication concepts, Modern tools of fishery extension education, participatory rural appraisal (PRA), Rapid rural appraisal (RRA), role of women in fisheries; Basics of statistics in fisheries and computer science.

UNIT-VI: Cold water fisheries resources of India. Ecological characters of cold water bodies of India. Important coldwater fish species. Status of cold water fisheries. Mahseer and trout fisheries. Seed production and culture practice of coldwater fishes. Present status, Prospect, Problems and development of cold water fisheries in India. Problems & prospects of sports fisheries in India.

UNDER SECRETARY
Directorate of Fisheries
Govt. of Sikkim, Gangtok