SCHEME AND SYLLABUS FOR THE RECRUITMENT TO THE POST OF FISHERIES DEVELOPMENT OFFICER

PART-A: WRITTEN (OBJECTIVE TYPE) EXAMINATION

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SYLLABUS

PAPER-1.

GENERAL STUDIES:

General Science

Current Events of National and International Importance.

History of India and Indian National Movement. India and World Geography.

General Mental Ability.

Questions on General Science will cover General appreciation and understanding of science including matters of every day observation and experience, as may be expected of a well educated person who has not made a special study of any particular scientific discipline. In current events, knowledge of significant national and international events will be tested. In History of India, emphasis will be on broad general understanding of the subject in its social, economic and political aspects. Questions on Indian National Movement will relate to the nature and character of the nineteenth century resurgence, growth of Nationalism and attainment of independence. In geography emphasis will be on geography of India. Questions on geography of India will relate to physical, social and economic geography of the country, including the main features of the Indian agricultural and natural resources. On general mental ability, the candidates will be tested on reasoning and analytical abilities.

PAPER-2.

SUBJECT:

Section-A (Non-chordata and Chordata)

1. Non-Chordata:
   - Concept of Binomial nomenclature specie and genus
   - Phylum Protozoa: Parasitic amoebae, Plasmodium, Tryanosoma, Paramoecium
   - Phylum Porifera: The systematic position of sponges canal system, skeleton
   - Phylum Coelenterata: Concept of polyp and medusa, phenomenon of polymorphism (siphonophora) coorals and cora formation. Ctenophores and their systematic position.
   - Phylum Platyhelminthes: Fasiola, Taenia parastic adoption in termatodes and cestodes, trematodes and parasites on fishes.
   - Phylum Nemathelminthes: Ascaris, Strongyloides Wuchereria Dracunculus.
   - Phylum Annelida: General characters, classification with examples, Vermi culture, compost.
   - Nephridial system in Annelids: Reproduction in Annelida, wormi culture and compost
   - Phylum Arthopoda: Mouth parts of mosquito, House fly, Appendages of Prawn, shell fishes and source of food, insects and their economic importance.
   - Peripatus its structure: general organization and systematic position.
   - Phylum Mollusca: Unio (fresh water mussel), Shell fishes as source of food/pearl culture.
   - Phylum Echinodermata: Echinoderm larvae; water vascular system, Evolutionary significance of echinoderms larve.
   - Phylum Hemichordata: Systematic position of Hemichorders.

2. Chordata:
   - Urochordata: Herdmania, Retogressive metamorphosis
   - Cephalochordata: Amphioxus – general character and affinities only
   - Class pisces: General characters of chondrivthyes and osteichthyes; distinctive features of crossopteryi
Latimaria (coelacanth fish) | Lung fishes dipnoifishes and their importance to mankind. | A survey on edible fishes in A.P.

Class Amphibia | General characters of Anura, Urodela and Apoda |
Class Reptilia | The outline classification of Reptiles with general characters of chelonia; squamata, crocodilla, Dinosaurs. Poisonous and non-poisonous snakes of India.
Class Mammalia | General characters and distribution of Prototheria; Mataheria and eutheria. Distribution of Marsupials: Adaptive radiation in marsupials, Aquatic mammals, their influence on Fish in the Sea.
Embroyology | Gametogenesis and fertilization, the development of Amphioxus frog, chick and Rabbit, Fate maps, inducers and inducting mechanism.

3. General Biology: Generics; Cytology and Ecology:

General Biology:
- a) General aspects of endocrine glands, Hormone action
- c) Palaeontology: Elephant
- d) Zoogeography: The zoogeographical realms and the fauna of various Zoogeographical regions and discontinuous distribution.

Genetics:
- Heredity; Mendelism, Linkage, Sex linkage over, Recombinant DNA technology, transgenic animals and its effect on fisheries.

Cytology:
- Ultra structure of a cell and cell Organeles with their structure and functions. The structure of chromosome. Prokaryotic and Eukaryotic cells. Nucleic acids DNA, RNA. Protein synthesis.

Ecology:
- Flow of energy through ecosystem, the concept of ecology and ecosystems (Aquatic and terrestria) Ecological pyramids; web of life organismal physiology; Biomass production
  1. Physiology of digestion
  2. Physiology of Muscle contraction
  3. Physiology of Excretion and Osmo-regulation
  4. Cell Metabolism: Glycolysis, Tri corbolic acid (TCA) cycle, Beta oxidation.

Section-B: Mari Culture and Aquaculture.

1. MARI-CULTURE:

Introduction:
- Physico-chemical parameters of sea water and its effects on fishery wealth.
- Terminology associated with marine fisheries.
- Plankton – (Micro, Macro Nano), etc., and Biomass.
- Condition of Sea: Effect of Currents and current system in the sea on fishery wealth in sea.
- Marine fishes: Important food fishes (including prawns and shrimps) of Andhra Pradesh.
- Commercially important Marine fisheries of India and Andhra Pradesh.
- Identification of different species, classification, Identification of different species.
- Commercial importance of marine organisms.
- Migration of fishes in sea, Effect of fishing, Closed season, ban on fishing, seal ranching.
- Harbours, Navigation, Gear and Crafts: Fishing harbours, maintenance of hygiene in harbours and landing centers, use of VHF sets.
- Crew Life saving and Fire fighting equipment.
- First aid Precautions for emergencies and Engines
- Marine electronic and Navigational equipments.
- Weather prospects-Storm signals, Rules of Navigation.
- Fishing Gears and Crafts used in the marine, brackish and inland waters
- Types of trawling-actual operations.

2. AQUACULTURE:

Fish culture: Use of Fisheries in different sectors like Food, Income, Commerce, Recreation, Health and Mental capabilities.
- Different types of water resources available and their utilization.
- Fish culture practices in India – capture and culture fisheries.