

Tamil Nadu Public Service Commission
Syllabus
Fisheries Technology, Fisheries Science and Navigation Engineering
(Diploma Standard)

Code:589

Unit I: Fishery Biology (15 questions)

Classification of fishes - Morphometric and Meristic Characters - Length Weight Relationship - Food and Feeding Habits - Reproductive Biology - Fish Physiology - Developmental Biology of Fin Fishes, Shell fishes - Von Bertalanffy's Growth equation - growth parameters - mortality parameters.

Unit II: Inland and Marine fisheries (25 questions)

Capture fishery resource of India - Major riverine fisheries of India - Lake Fisheries - Reservoir Fisheries - Cold Water Fisheries - Pollution in Aquatic system - Principles of Marine Fisheries of Indian Coasts - Crustacean fishery resources - shrimps, lobsters - Molluscan resources - Gastropods, Bivalves - Sea weed Resources - Distribution of living organisms in the Sea - Aquatic Ecology.

Unit III: Nautical Technology (25 Questions)

Principles of seamanship - International regulations for preventing collision at sea - Compass - Navigational Charts - Mercator Projections - Buoyage System - International Code flag signals - Navigational lights – Fire fighting equipments – Storm Signals - Distress Signals - Life Saving Appliances - Life buoy - Life jackets - Life raft.

Unit IV: Fish Processing Technology (20 Questions)

Proximate composition of fish - Principles of fish spoilage - Rigor Mortis - Drying, Salt drying, Icing, Freezing, Canning, Fishery by products, Fish packaging technology.

Unit V: Aquaculture (25 Questions)

Site selection for fish culture - Types of ponds – Pumps - Aerators - Sluice - Monk - Canals - Types of dykes - composite fish culture - Plankton - Fertilization - Aqua feeds - Pond disinfection with lime - Water quality management - Disease control - Common fresh water and marine ornamental Fishes - Common Coastal Aquaculture and Mariculture practices

Unit VI: Oceanography and Meteorology (10 Questions)

Waves - Tides – Currents - El-Nino - Salinity - Tsunamis - Weather - Climate - humidity - Tropical Cyclones - Atmospheric pressure.

Unit VII: Fishing Gear and Craft Technology (25 Questions)

Classification of Fishing Gears - Fishing Gear Materials - Modern Fishing gears - Trawls, Gill, Nets, Longlines - Fishing Gear Accessories - Fishing Crafts of Indian Coast - mechanization of fishing crafts - Tonnage system - Stability of fishing vessels - Wooden boat construction - Steel boat construction – Fiberglass Reinforced Plastic (FRP) boat Construction - Dry docking - Boat building yards - Maintenance of fishing vessels

Unit VIII: Fishery Economics (10 Questions)

Basic Economic terminologies - Elasticity - Price, Income - Cost, returns - Marketing - Co-operatives - Socio economic Survey - economics of fish seed production, Fish production system - economics of marine capture fisheries.

Unit IX: Fisheries Resource Management and Administration (20 Questions)

Open Access Fisheries - Maximum Sustainable Yield (MSY) - Maximum Economic Yield (MEY), Fishing holidays, Mesh size regulations - Growth over fishing - Recruitment over fishing - Ecosystem approach for fisheries management – Exclusive Economic Zone (EEZ) - Marine fisheries regulations - Marine Fisheries Resource conservation

Unit X: Fisheries Mechanical, Electrical and Electronic Engineering (25 Questions)

Classification of Engines - Marine diesel Engines - parts of Internal Combustion (IC) engines - Fishing machineries - Net hauler, Winch - Fish processing machineries - Canning machineries - Refrigeration machineries - Ice Making machineries.

Principles of electricity - Electro fishing - Batteries - Principles of Radio Transmission - RADAR - sound propagation in water - Fish finding Equipments - Echo Sounder - SONAR - Communication Equipment - Radio Telephone – Satellite Telephone.
