

## GROUP - A

### PAPER-IV ICHTHYOLOGY - ANATOMY AND PHYSIOLOGY

(Questions will be set from each Unit)

- UNIT - I** 1. Origin and evolution of fishes. 2. Major groups of living fishes. 3. Major groups of extinct fishes. 4. Classification of fishes. 5. Origin and evolution of paired fins. 6. Hill Stream fishes & Deep Sea fishes.
- UNIT - II** 1. Integuments - Scales, Colouration, light organs and poison glands.  
2. Fins - Types, structure, modification and function of fins.  
3. Endoskeleton of typical teleost.  
4. Digestive system - modification of alimentary canal, physiology of digestion.  
5. Growth of fishes. 6. Invertebrates.
- UNIT - III** 1. Respiration - Structure and function of respiratory organs, physiology of respiration, Accessory respiratory organs in fishes.  
2. Adaptations for air breathing among fishes.  
3. Structure, function, origin and evolution of air bladder.  
4. Blood Vascular System in fishes.  
5. Excretion and Osmoregulation in fishes.  
6. Sound producing and Electricity producing organs in fishes.
- UNIT - IV** 1. Nervous System in fishes. 2. Sense organs in fishes. 3. Endocrine glands in fishes. 4. Reproductive organs and physiology of reproduction.  
5. Fertilization and development in fishes (Oviparity, Viviparity, Ovoviviparity). 6. Parental care in fishes.