Zoology Syllabus for Chattisgarh Group-I Services

The Zoology Syllabus for Chhattisgarh State Civil Services Preliminary Exam-2011 is given below. The examination will be held on 6 May 2012 (Sunday) by the Chhattisgarh Public Service Commission. Acquaint yourself with the break-up of Zoology syllabus into various sections.

Paper-I

Section-A

Non-Chordata and Chordata:

1. A general survey, classification and relationship of the various phyla.
2. Protozoa: Study of the structure, bionomics and life history of Verticella, Paramecium, Monocystic, malarial parasite, Typanosoma. Protozoa & disease.
3. Perifera: Sycon.
4. Coelentorate: Structure and life history of Obelia and Aurelia. Sea anemones, Corals, Aleyonium.
5. Helminths, Structure and life history of planaria. Fasciola. Tacenia, Ascaris, Medical importance of Nematedes.
6. Annelida, Neries, earthworm and leech
7. Arthropoda, Palaemon, Scorpion, Cockroach
8. Mollusea. Unio and Pila, Pearl Formation Modifications of nervous system.
9. Echinodermata, Asterias and its larva.
10. General organisation and characters, outline classification and inter-relationship of proto-chordata. Pisces, Amphibia, Reptilia, Aves and Mammalia.
11. Neoteny and retrogressive metamorphosis.
12. A general study of comparative account of the various systems of vertebrates.
13. Locomotion and respiration in fishes, structure and affinities of Dipnoi.
14. Structural peculiarities of Amphibia.
15. Poisonous and non-poisonous snakes of India
16. Aerial adaptations of birds.

17. Structural peculiarities and affiniting distribution relation of prototheria and Metatheria.

Section-B

Ecology and Economic Zoology

1. Environment: Abiotic factors and their role; Biotic factors-Inter and Intra-specific relations.
2. Ecosystem, Niogeo-Chemical cycles.
3. Adaptation in fresh water, marine and terrestrial habitats.
4. Pollution in air, water and land.
5. Wild life in India and its conservation. Economic Zoology
6. Parasitism, Commenselism and Host parasite relationship.
7. Parasitic protozoans and helminths of man.
8. Beneficial and harmful insects.

Paper-II

Cell Biology, Genetics, Evolution and Systematics

Section-A

1. Cell Biology-Structure and function of cell and cytoplasmic consitituents: Structure of nucleus, plasma membrane, mitochondria, golgibodies, endoplasmic reticulum and ribosomes, cell division, mitosis and miosis. Gene structure and function: Watsen-Crick miodel of DNA, sex-chromosomes and sex-determination.
2. Genetics-Mendelian laws of inheritance, linkage and crossing over, mutation and evolution, cytoplasmic inheritance genes and diseases.
3. Evolution and Systematics-Orgin of life, History of evolutionary thought. Lamarck and his works, Darwin and his works, Sources and nature of organic variation. Natural selection, Isolation. Concept of species and sub-species, principles of classification, zoological nomenclature and international code. Fossils, geological eras, distribution of animals zoogeographical realms of the world.

Section-B

Biochemistry, Physiology and Embryology

1. Biochemistry-Structure of carbohydrates, lipids, amino-acids, proteins and nucleic acids, glycolysis and Krebs cycle, oxidation and reduction. Oxidative phosphorylagion, energy conservation and release, ATP, chelesterol. Enzymes and coenzymes, Hormones and their functions.
2. Physiology with special reference to mammals-Composition of blood, blood groups in man, coagulation. Oxygen and carbondioxide transport, nephron and urine formation, mechanism of conduction along axon and across synapes, neurotransmitters, Vision,

Hearing and other receptors, mechanism of contraction of skeletal muscle, role. Of salivery gland, liver, pancresas and intestinal glands in digestion. Absorption of digested food, roles of pituitary, thyroid, parathyroid, pancreas, adrenal testis, ovary and pineal body.

3. Embryology-Gametogenesis, fertilization, types of eggs, cleavage, development up to gastrulation in Branchiostoma, frog and chick, Metamorphosis in frog; Formation and fate of extra embryonic membranes in chick; formation of amnion, allantcis and classification of placenta in mammals, function, of placenta in mammals.