(Cheetah), Canis familiari (dog), Ursus (bear) Hyaena (hyanea), Phoca (seal)

(h) Rodentia: Mus (domestic rat), Hystrix (Porcupine)

(i) Lagomorpha: Lepus and Oryctolagus (hare and rabbit)

(j) Insectivora: Erinaceus (hedge-hog), Crocidura (chhachhundar)

(k) Chiroptera: Pteropus (Flving-fox).

(1) Primates: Macaca (rhesus monkey), Hylobates (gibbon), Simia (Orangutan),

Anthropo pithecus (chimpanzee), Gorilla, Homo sapiens (man).

## Histology

- (i) Tissues: Preparation of the following
- (a) Epithelia:
- (i) Squamous (ii) Ciliated and (iii) Stratified
- (b) Muscular:
- (i) Striped muscles (ii) Unstriped muscles.
- (c) Connective

(i) Areolar tissue (ii) Tendon the leg muscles of frog (tease and examine in glycerine)

(ii) Adipose tissue from insect and frog (iv) cartilage (free hand sections of frogs sale.co.uk hyoid and suprascapula, train with haematoxyline and (v) Bone (Decalcified).

(d) Blood; Preparation of Vertebrate blood film, stain with Leishmann's stain.

(e) Nervous: Neurons

(f) Histology of various organs-prepared slides.

## Physiology

(i) Experiments to be performed by candidates: amylase. Osmolarity of blood, Hemin crystals and test for such and acetone in urine Determination of

haemoglobin % in blood cample s

(ii) Detection of a fine acids in blood of a mima by paper chromatography. 1 Genera 

Candidates will be required, to show knowledge of the method of microscopic techniques and to examine, describe or dissect the types prescribed. Candidates will also be required to submit their notebooks containing a complete record of laboratory work initiated and dated by the teacher for the determination of result of examination. **Microbiology:** Morphology, physiology and infection (outline) of bacteria and viruses. Bacterial and viraldiseases.

### Unit-III

**Animal Behavior**: Introduction to Ethology and Psychobiology, Patterns of behavior (taxes, reflexes, instinct andmotivation); biorhythms; learning and memory imprinting their ole in, Migration offishes Schooling and shoaling& birds.

#### Unit-IV

**Pollution and Toxicology**: Concept, sources, types (air, water, soil, noise & radiation), and control ofenvironmental pollution. Exposure of toxicants (routes of exposure, and duration and frequency of exposure); dose -response relationship categories of toxic effects.

# B.Sc. Part III ZOOLOGY PRACTICAL SYLLABUS

Permanent Preparation of: Euglena, Paramecium and rectal protozoans from frog. Stool examination for different intestinal parasites. Study of prepared slides/ specimens of Entamoeba, Giardia, Leishmania, Trypanosoma,

Plasmodium, Fasciola, Cotugnia, Taenia, Rallietina, Polystoma Paramphistomum, Schistosoma, Echinococcus, Dipylidium, Enterobius, Ascaris and Ancylost ma Permanent Preparation of Cimex (bed bug)/ Pediculus (Louse). Harra opinus (cattle louse),

fresh water annelids, arthropods; and soil arthropods

Larval stages of helminths and arthropods.

Permanent mount of wings, mouth principal developmental stages of mosquito and house fly. Permanent preparation of tixts/ miles, abdominal gills of acuatid insects viz. Chironomus larva, dragonfly entire of hymphs, preparation of antenna of housefly.

Collec on in clentification of person Q

Life history of silkworm, honey ee and lac insect.

Different types of important edible fishes of India.

Prepared slides of plant nematodes.

Demonstration of counting of cells (blood and protozoan) by haemocytometer,

haemoglobinometer, pH meter, Colorimeter

Microbiological Techniques: Media Preparation and sterilization, inoculation and Monitoring.

Study of an aquatic ecosystem, its biotic components and food chain.

Preparation of chromosomes, Test for carbohydrate Photochemical demonstration of proteins and lipids, using hand sections using hand sections, endocrine glands (Neurosecretory cells) of cockroach.

Demonstration of developmental stages of chick.

Project Report/ model chart making.

**Dissections** :

Cockroach : Central nervous system

Wallago : Afferent and efferent branchial vessels, Cranial nerves, Weberian ossicles.

Practical exercises based on Biostatistics, Microbiology, Immunology, Biotechnology, Animal Behavior, Pollution & Toxicology.