

**जंतु विज्ञान-प्रथम वर्ष**  
**कोशिका विज्ञान एवं अक्षेरुकी**  
**(प्रथम – प्रश्न पत्र)**

**UNIT – 1**

Chapter 1 - The Cell (Prokaryotic & Eukaryotic)

Chapter 2 - Methods in Cell Biology (Microscopy Light & Electron)

Chapter 3 - Organisation of cell extranuclear and nuclear (plasma membrane, mitochondria, chromosomes, ER, Golgi bodies, Ribosomes)

Chapter 4 - Cell division (Mitosis & Meiosis)

Chapter 5 - An elementary idea of cell transformation &cancer immunity (elementary idea)

**UNIT-2**

Chapter 6 - General characteristics & classification of invertebrates upto orders with examples.

Chapter 7 - Protozoa- type study Paramoecium, protozoa & disease

Chapter 8 - Porifera- type study Sycon

Chapter 9 - Coelenterata type study Obelia

**UNIT-3**

Chapter 10 - Helminthes- type study fasciola

Chapter 11 - Annelida – type study Pheretima

Chapter 12 - Arthropoda- type study Palaemon

## **UNIT-4**

Chapter 13 - Mollusca- type study *Pila*

Chapter 14 - Echinodermeta- *Asterias* (Starfish) External features and water vascular system.

Chapter 15 - Protochordata- type study *Balanoglossus*

# **कशेरुकी एवं भूणीय विज्ञान**

## **(द्वितीय - प्रश्न पत्र)**

### **Unit - 1**

- Chapter 1 - Origin and Classification of Chordates.
- Chapter 2 - Protochordates- type study Amphioxus
- Chapter 3 - A Comparative account of Petromyzon & Myxine
- Chapter 4 - Fishes- skin and scales, migration in fishes, parental care

### **Unit - 2**

- Chapter 5 - Amphibia- parental care, neoteny
- Chapter 6 - Reptilia- poisonous & non poisonous snakes, posionous snakes, poison apparatus, snake venom
- Chapter 7 - Aves- filght adaption in birds
- Chapter 8 - Discuss- birds are glorified reptiles
- Chapter 9 - Mammals- comparative account of prototheria, metatheria & eutheria and affinities.

### **Unit - 3**

- Chapter 10 - Gametogenesis, fertilization & parthenogenesis
- Chapter 11 - Developoment of frog upto formation of three layers

### **Unit - 4**

- Chapter 12 - Developoment of chick upto formation of three germ layer, extra embroyonic members
- Chapter 13 - Placenta in mammals
- Chapter 14 - Embryonic induction organizers & differentiation.

# **बी.एस.सी – I**

## **जन्तुविज्ञान प्रायोगिक**

- 1. परिचय: प्रयोगशाला के लिए आवश्यक सूक्ष्मदर्शी तथा सामान्य निर्देश  
(Introduction: Necessary Microscope for Laboratory General Instruction)**
- 2. विच्छेदन (Dissection)**
  - (i) केचुआ (Earthworm)**
  - (ii) पाइला (Pila)**
  - (iii) प्रान (Prawn)**
- 3. संग्रहालय निर्देशों का अध्ययन (Study of Museum Specimens)**
- 4. उत्तकीय स्लाइडों का अध्ययन (Study of Histological Slides)**
- 5. मुर्ग के भ्रूण स्लाइड (Chick Embryological Slides)**
- 6. कोशिका विज्ञान प्रयोग (Cytology experiments)**
- 7. तुलनात्मक अस्थिविज्ञान: मेढ़क एवं खरगोश  
(Comparative Osteology: Study of Frog and Rabbit)**