

C.B.C.S
B.Sc. I (Subsidiary)
Semester-I

F.M. : 75

Answer any five questions.

Sufficient choice must be given.

If there is grouping at least two questions must be answered from each group.

Ashu

Subsidiary / General



B.Sc. Part - 1
Subsidiary/General
1st Semester

F.M-75

Time : 3 Hrs

Group A – Non-Chordata

1. Bionomics, general character and classification (upto orders) of the following phyla :
Protozoa, Porifera, Coelenterata, Platyhelminthes, Aschelminthes.
2. Detailed study of the structure and life history of the following types :-
 - a. Protozoa – Paramecium
 - b. Porifera – Sycon
 - c. Coelenterata – Obelia
 - d. Platyhelminthes – Fasciola
 - e. Aschelminthes – Ascaris

Group B - Ecology

Unit 1 : Introduction to Ecology

History of ecology, Autoecology and synecology, Levels of organization, Laws of limiting factors, Study of physical factors.

Unit 2 : Community

Community characteristics : species richness, dominance, diversity, abundance, vertical stratification, Ecotone and edge effect ; Ecological succession with one example

Unit 3: Ecosystem

Types of ecosystem with one example in detail,
Food chain : Detritus and grazing food chains, Linear and Y-shaped food chains.

Practicals

F.M- 25

Time : 3 Hrs

1. Dissection
2. Temporary mounting/Study of Planktons
3. Identification

- (a)Permanent slides-2
 - (b)Museum specimen-2
 - (c)Plankton slides-1
4. Practical Record & Viva.

GE-2

B.Sc. Part - 1
Subsidiary/General
2nd Semester

F.M-75

Time : 3 Hrs

Group A-Nonchordates

1.Binomics , General character and classification (upto orders) of the following phyla : Annelida, Arthropoda,Mollusca,Echinodermata.

2.Detailed study of the structure and life history of the following types

- (a)Annelida – Pheritima
- (b)Arthropoda—Palaemon
- (c)Mollusca—Pila
- (d)Echinodermata—Asterias

Group B-Cell Biology

- 1.Diversity of cell size & shape
- 2. Cell theory
- 3.Structure & function of Plasma membrane & cytoplasmic organelles.
- 4.Cell division.
- 5.Cell cycle.

Practicals

F.M-25

Time : 3 Hrs

- 1.Dissection
- 2.Temporary mounting/Cytology
- 3.Identification
 - (a)Permanent slides-2
 - (b)Museum specimens-2
 - (c)Cytological slides-1(Meiosis/Mitosis.)
- 4.Practical Record & Viva.

Ashu



B.Sc. Part - 2
Subsidiary/General
3rd Semester

F.M-75

Time : 3 Hrs

Chordata

1. Bionomics, general character and classification (upto order) of living chordates of the following groups: Protochordates, Cyclostomes, Pisces, Amphibia, Reptilia, Aves & Mammals.
2. Study the following types :
 - (a) Hemichordata : Balanoglossus
 - (b) Urochordata : Herdmania (including retrogressive metamorphosis)
 - (c) Cephalochordata : Amphioxus
 - (d) Fishes : Scoliodon , Pisciculture
 - (e) Reptiles : Biting & feeding mechanism of snakes
 - (f) Aves : Columba, flight adaptation
 - (g) Mammals : Characters, distribution and affinities of Prototheria & Metatheria

Practical

Marks : 25

Time : 3 hours

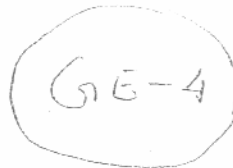
Experiments

1. Different adaptive features in vertebrates.
2. Temporary mounting
3. Identification:
 - (a) Permanent slides-2 (b) Museum specimens-2
4. Practical record & viva.

Details of Experiment

1. Different adaptive features in vertebrates—e.g.-Exocoetus, Chamaleon, Draco, Bat etc.
2. Mounting: Scales of fishes, ampulla of Lorenzini.
3. Identification :-
 - (a) Slides from histology
 - (b) Museum Specimens

Ashu



B.Sc. Part - 2
Subsidiary/General
4rth Semester

1. Embryology

Gametogenesis, Fertilization, Parthenogenesis

2. Physiology

Digestion, Respiration, Excretion.

3. Endocrinology

Histophysiology of following endocrine organs – Pituitary, Thyroid, Adrenal, Testis, Ovary and islets of Langerhans.

4. Evolution

- (a) Sources of hereditary variations and their role in evolution
- (b) Darwin's theory of natural selection & Neo Darwinism
- (c) Isolating mechanism & their role in evolution

Practical

Marks : 25

Time : 3 hours

Experiments

- 1. Haematology
- 2. Physiology
- 3. Identification
- 4. Record & Viva

Details of Experiments

- 1. Haematology – Bleeding & Clotting time, Blood group, Hb%
- 2. Physiology – Pulse Rate Counting (Mammal), Frog-Rate of Heartbeat by Chimograph, Earthworm reflex action (Photoreceptors)

3. Identification

- Embryological Slides-3
- Endocrinological Slides-2

Asluku