

B. Sc. Part - I:- ZOOLOGY (SUBSIDIARY & GENERAL

Time: 3 Hours]

(Theory)

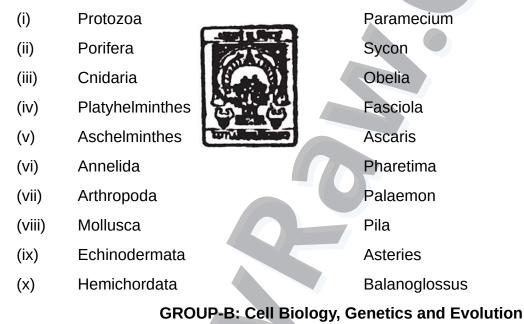
[Full Marks: 75

Five Questions are to be set from each group. Students will be required to answer five questions at least two from each group.

GROUP-A: Non-Chordata

 Bionomics, Genera! characters and classification (up to orders) of the following phyla-Protozoa, Porifera , Coelenterata , Platyhelminthes, Aschelminthes, Annelida, Arthropoda, Mollusca, Echinodermata and Hemichordata .

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



1. Cell Biology and Genetics:

- (i) Gametogenesis, Fertilization and Parthenogenesis.
- Ultra structure and function of the following cell organelles- Plasma membrane. Endoplasmic reticulum, Mitochondria, Golgibody, Ribosomes, Chromosome Lysosome.
- (iii) Structure and function of DNA.
- (iv) Gene Mutation
- (v) Linkage and Crossing ever.
- 2. Evolution:
- (i) Sources of hereditary variation and their role in evolution.
- (ii) Darwin's theory of Natural selection & Neo-Darwinism.
- (iii) Isolating mechanisms and their role in evolution.

PRACTICAL

ZOOLOGY PART-I (SUBSIDIARY & GENERAL)

| ZUULUGT PART-I (SUDSIDIART & GENERAL) | | | |
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| Time: 3 Hours] | | | [Full Marks: 25 |
| 1. | Dissection | | 06 |
| Pheretima: Reproductive system, nervous system, Alimentary canal. | | | |
| Palaemon: Alimentary canal, Nervous system . | | | |
| Pila: Alimentary canal, Nervous system, Organs of Pallial Complex. | | | |
| 2. Mounting (Permanent stained preparation)04Septal nephridia, Ovary & Setae of Earthworm, Statocyst of Prawn, Radula and Osphradium of Pila.04 | | | |
| 3. | Spoting | | 06 |
| | (a) Museum specimens | - 2 | |
| | (b) Slides | - 3 | |
| | (c) Evolution. | -1 | |
| 4. | Cytology | | 04 |
| | Squash preparation to show stages of Mitosis. (Onion root tipes) | | |
| | and Meiosis (Grasshoper testis) | | |
| | Giant chromosomes of Chironomous/Drosophile larvae. | | |
| 5. | Practical records. | | 05 |