

Magadh University



COURSES OF STUDIES

For

Bsc Zoology (Hon. / Sub. / Gen.)

IN ZOOLOGY

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

1. Bionomics, General 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.

(i)	Protozoa		Paramecium
(ii)	Porifera		Sycon
(iii)	Cnidaria		Obelia
(iv)	Platyhelminthes		Fasciola
(v)	Aschelminthes		Ascaris
(vi)	Annelida		Pheretima
(vii)	Arthropoda		Palaemon
(viii)	Mollusca		Pila
(ix)	Echinodermata		Asteries
(x)	Hemichordata		Balanoglossus

GROUP-B: Cell Biology, Genetics and Evolution

1. Cell Biology and Genetics:

- (i) Gametogenesis, Fertilization and Parthenogenesis.
- (ii) Ultra structure and function of the following cell organelles- Plasma membrane, Endoplasmic reticulum, Mitochondria, Golgi body, Ribosomes, Chromosome, Lysosome.
- (iii) Structure and function of DNA.
- (iv) Gene Mutation
- (v) Linkage and Crossing over.

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)

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) | 04 |
| | Septal nephridia, Ovary & Setae of Earthworm, Statocyst of Prawn, Radula and Osphradium of Pila. | |
| 3. | Spotting | 06 |
| | (a) Museum specimens - 2 | |
| | (b) Slides - 3 | |
| | (c) Evolution. - 1 | |
| 4. | Cytology | 04 |
| | Squash preparation to show stages of Mitosis. (Onion root tips) and Meiosis (Grasshoper testis) | |
| | Giant chromosomes of Chironomous/Drosophile larvae. | |
| 5. | Practical records. | 05 |

