

M.Sc. (Previous) DEGREE EXAMINATION, DECEMBER 2007.

First Year

Zoology

Paper I — SYSTEMATICS AND ANATOMY OF INVERTEBRATES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. (a) Describe the various types of reproductive processes in Protozoa.

Or

- (b) Write notes on :

- (i) Sponges.
- (ii) Entamoeba.

2. (a) Give a detailed account on polymorphism in Coelenterata.

Or

- (b) Write notes on :

- (i) Nematodes.
- (ii) Endo parasites.

3. (a) Give a detailed account on the general organisation of Arthropoda.

Or

- (b) Write notes on :

- (i) Polychaeta.
- (ii) Trochophore larva.

4. (a) Write an essay on general organisation of echinodermata.

Or

- (b) Write notes on :

- (i) Gastropoda.
- (ii) Bipinnaria.

5. (a) Write an essay on general organisation of Rotifera.

Or

- (b) Write notes on :

- (i) Ectoprocta.
- (ii) Chaetognatha.

First Year

Zoology

Paper II — SYSTEMATICS AND ANATOMY OF CHORDATES AND GAMETE
BIOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Each questions carries 20 marks.

1. (a) Discuss the general character of chordates.
Or
(b) Write short notes on :
 - (i) Urochordata.
 - (ii) Cephalochorda.

2. (a) Write an essay on migration in fishes.
Or
(b) Write short notes on :
 - (i) Parental care in fishes.
 - (ii) Poisonous and Non-poisonous snakes.

3. (a) Give notes on general characters and classification (up to order) of Aves (Birds).
Or
(b) Write short notes on :
 - (i) Evolutionary significance of Archaeopteryx.
 - (ii) Flightless birds.

4. (a) Give an account on general characters of South Indian mammals.
Or
(b) Write short notes on :
 - (i) Aquatic mammals.
 - (ii) Adaptive radiation in mammals.

5. (a) Discuss in brief the process of spermatogenesis.
Or
(b) Write short notes on :
 - (i) Germ layers.
 - (ii) Oeostrous cycle.

M.Sc. (Previous) DEGREE EXAMINATION, DECEMBER 2007.

First Year
Zoology

Paper III — CELL BIOLOGY, GENETICS AND EVOLUTION

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

All questions carry equal marks.

1. (a) Draw a neat well labelled ultra structure of cell membrane and write an account of cell membrane.

Or

- (b) Write short notes on :
- (i) Biochemical composition of living cell.
 - (ii) Endoplasmic reticulum.

2. (a) Give a detailed account of Protein synthesis with appropriate diagrammatic representation.

Or

- (b) Write short notes on :
- (i) DNA structure.
 - (ii) r-RNA.

3. (a) Illustrate your answer about somatic cell division with neat and labelled diagrams.

Or

- (b) Write short notes on :
- (i) Xygotene stage.
 - (ii) Lamp brush chromosomes.

4. (a) What is sex linked inheritance? Explain with suitable examples.

Or

(b) What is meant by sex determination? How do you determine sex?

5. (a) Give an account of Hardy Weinberg's law.

Or

(b) What is meant by species? How do you explain the species concept?

M.Sc. (Previous) DEGREE EXAMINATION,

DECEMBER 2007.

First Year

Zoology

Paper IV — ANIMAL ECOLOGY AND WILDLIFE

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. (a) Describe the light penetration in lake waters and factors affecting light availability.

Or

(b) Write short notes on :

- (i) Nature and scope of ecology.
- (ii) Life supporting properties of water.

2. (a) Write an essay on trophic structure and ecological pyramids.

Or

(b) Write short notes on :

- (i) Food webs.
- (ii) Anthropogenic stress and toxic waste as limiting factor.

3. (a) Write in detail about predation and parasitism.

Or

(b) Write short notes on :

- (i) Herbivory.
- (ii) Ecological niche and guild.

4. (a) What is population? Describe the properties of the population.

Or

(b) Write short notes on :

- (i) r- and k selection.
- (ii) Density dependent action in population.

5. (a) Discuss the characteristics and objectives of the Biosphere reserves.

Or

(b) Write short notes on :

- (i) IUCN classification of rare animals.
- (ii) Hot spots.