

M.Sc. (Final) Examination, 2001

ZOOLOGY

Paper II

**(Developmental Biology of Chordates and
Animal Ecology)**

Time Three Hours
Maximum Marks: 100

*Attempt **four** questions, selecting
at least **two** questions from each section.
All questions carry equal marks.*

**SECTION A
(Developmental Biology of Chordates)**

1. Discuss the major events in the metamorphosis of spermatid into sperm. Why these changes are essential?
2. 'The amount and disposition of yolk affects the cleavage pattern and blastula formation.' Justify this Statement.
3. Describe the development and functions of extra embryonic membranes in amniotes.
4. Write notes on any **two** of the following
 - (a) Development of heart.
 - (b) Mechanism of action of inducing substances.
 - (c) Hormonal control of metamorphosis.
 - (d) Regenerative ability in chordates.

SECTION B

(Animal Ecology)

5. Discuss the general properties of a population. Add a note on the forces that shape population growth.
6. Describe the abiotic and biotic components of a terrestrial ecosystem with special reference to the flow of matter and energy in this ecosystem.
7. Write an essay on 'resources and applied human ecology'.
8. Write short notes on any **two** of the following
 - (a) Shelford's law of tolerance.
 - (b) View points in modern ecology.
 - (c) Evolution of community.
 - (d) Community succession.