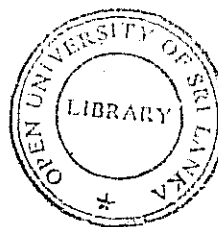


THE OPEN UNIVERSITY OF SRI LANKA

**B. Sc. DEGREE PROGRAMME – LEVEL 04
FINAL EXAMINATION – 2008/09**



ZOU 2166 – ANIMAL DEVELOPMENT

DATE: 15th January 2009

Time: 1.00 p.m. – 3.30 p.m.

ANSWER ANY FOUR (4) QUESTIONS

**ILLUSTRATE YOUR ANSWERS WITH CLEARLY LABELLED DIAGRAMS,
WHENEVER NECESSARY**

1. (i) Describe the process of egg formation within a mammalian ovary.
(ii) Discuss the differences in egg formation between a frog and a mammal.
2. (i) Describe the basic cleavage pattern of protostomes and that of deuterostomes.
(ii) Outline the differences between the two patterns.
3. (i) Describe the process of gastrulation in amphioxus.
(ii) Highlight the differences between the process of gastrulation in amphioxus and that of frog.
4. Write an account on the formation of the eye and the lens.
5. Give experimental evidence to support any three (3) of the following findings.
 - (a) The neural induction of amphibian embryos occurs at the late gastrula stage.
 - (b) Dorsal lip of the blastopore in amphibian embryos is a primary organizer.
 - (c) Cell surfaces are different and selective affinities exist among cells.
 - (d) Specification of mesoderm in amphibian embryos is induced by the vegetal region of blastula.
6. Write short notes on any three (3) of the following:
 - (e) Acrosomal reaction
 - (f) Cell differentiation
 - (g) Amphibian metamorphosis
 - (h) Animal cloning
