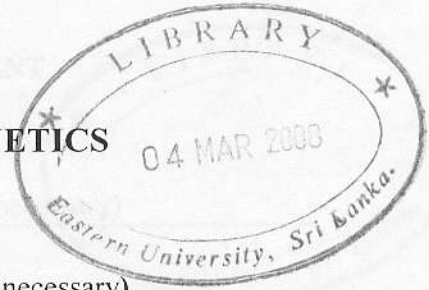


EASTERN UNIVERSITY, SRI LANKA  
SPECIAL DEGREE EXAMINATION IN ZOOLOGY 2004/2005  
(Jun/JUL 2007)

PART I

ZL -410 DEVELOPMENTAL GENETICS



Time :**Three** hours

Answer **all** questions

( Illustrate your answers with clear labelled diagrams where necessary)

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1. Describe briefly the role of the maternal gene *hunch back* in establishing antero-posterior pattern in the *Drosophila* embryo.
2. Write notes on **Two** of the following
  - a. *even skipped (eve)* and para segment formation
  - b. non autonomous effect in mosaics
  - c. role of the *patched (ptc)* gene in larval cuticle pattern.
3. "Apoptosis is an important process during the course of development and differentiation of an organ system of an organism" Discuss this statement with a named example.
4. Write notes on **Two** of the following
  - a. *Rough* gene (*R*) and the specification of photoreceptors
  - b. *wingless* expression in the imaginal wing disc
  - c. Role of promotor in gene regulation.
5. Discuss briefly the proto oncogene and Burkitt's Lymphoma.
6. Describe on the role of oestrogen in egg production and egg white protein synthesis in chickens.

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