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29 MAY 2008  
Eastern University, Sri Lanka

**EASTERN UNIVERSITY, SRI LANKA**  
**SECOND YEAR IN SCIENCE 2005/2006(Mar-Apr'08)**  
**SECOND SEMESTER (Proper)**  
**ZL 203 GENETICS & DEVELOPMENTAL BIOLOGY**

**Time: 2 hours**

**Answer all questions.**

**(Illustrate your answers with clear labeled diagrams where necessary)**

1. Using human as an example,
  - a. describe the structure of a chromosome;
  - b. the effects of changes in chromosomal structure and number in both autosomes and sex chromosomes.
  
2. Comment on **any two** of the following
  - a. IS elements
  - b. Maternal inheritance in flour moth
  - c. Oncogenes and cancer.
  
3.
  - a. What is induction and competence in organ development?
  - b. Discuss the role of inductors and competence in the development of an amphibian eye.
  
4. Write short notes on **any two** of the following:
  - a. Permanent contraception in human
  - b. Basic steps that are involved in ZIFT
  - c. Holandric gene
  - d. Formation of recombinant DNA.

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