EASTERN UNIVERSITY, SRI LANKA 29 MAY 2008 SECOND YEAR IN SCIENCE 2005/2006(Mar-Apr'08) SECOND SEMESTER (Repeat & Re-repeat) Only Priversity, Sri 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. Southern blotting
 - d. Mutagenic agents.
- 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. Formation of recombinant DNA
 - c. Lampbrush chromosome
 - d. Regeneration in Planaria.

XXXXXXXXX