

EASTERN UNIVERSITY, SRI LANKA  
SECOND YEAR SECOND SEMESTER EXAMINATION  
SCIENCE 2008/2009(SEP/OCT/NOV 2010) (PROPER)  
ZL 203 EUKARYOTIC GENETICS



Time: 02 hours.

Answer all questions.

(Illustrate your answers with clear labeled diagrams where necessary)

1. a). What do you understand by the term “transposable elements”?  
b). Give three examples for above mentioned in (a).  
c). Explain one of the applications of P-elements in the study of Genetics.
2. Comment on **any two** of the following:  
a). Formation of recombinant DNA;  
b). Complementation test;  
c). Extranuclear inheritance in flour moth.
3. Briefly explain the role of *engrailed (en)* gene in the segmentation pattern of *Drosophila*.
4. Write short notes on **any two** of the following:  
a). Shortest intercalation rule in polar coordinate model;  
b). *wingless (wg)* expression in the wing imaginal disc of *Drosophila* third instar larva;  
c). Genetic mosaics.

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