

SECOND YEAR EXAMINATION IN SCIENCE 2012/2013 (OCT/NOV 12015)
SECOND SEMESTER (PROPER & REPEAT)
ZL 203 EUKARYOTIC GENETICS



Time: 02 hours.

Answer all questions.

Illustrate your answers with clear labeled diagrams where necessary)

1. a). What is cytoplasmic inheritance? (20 marks)
b). Describe briefly on the inheritance pattern in snail shell coiling. (80 marks)
2. a). Define the term genetic engineering? (12 marks)
b). Explain in detail the *Agrobacterium* mediated gene transfer in dicot plants. (88 marks)
3. Write short notes on **any two** of the following:
a). IS elements.
b). DNA finger printing (Southern Analysis).
c). Prenatal diagnosis. (100 marks)
4. Comment on **any two** of the following:
a). Retrovirus and oncogenesis.
b). Molecular cloning.
c). Dorso-ventral pattern formation in *Drosophila* wing. (100 marks)

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