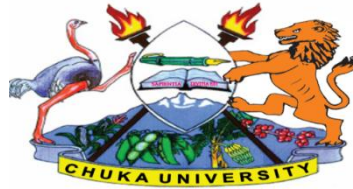


CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF DOCTORATE OF PHILOSOPHY IN ZOOLOGY

ZOOL 942: DEVELOPMENTAL BIOLOGY

STREAMS: PhD ZOOLOGY

TIME: 3 HOURS

DAY/DATE: FRIDAY 14/12/2018

2.30 P.M - 5.30 P.M.

INSTRUCTIONS

- Answer any **THREE** Questions
- Do not write anything on the question paper

QUESTION ONE

Describe the genetic regulation of early embryonic development in *Drosophila melanogaster*.

[20 Marks]

QUESTION TWO

(a) Discuss stem cell differentiation

[10 Marks]

(a) Explain the role of genes in development

[10 Marks]

QUESTION THREE

Explain how you can use transgenesis in production of commercial products.

[20 Marks]

QUESTION FOUR

The human body contains hundreds of different cell types, and every one of them develops from the single cell that starts the process. How do the cells get to be so different from each other? Discuss.

[20 Marks]

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