

**EXAMINATION FOR INTERNAL STUDENTS**

For The Following Qualifications:-

*B.Sc. B.Sc. (Intercal)*

**Genetics C201: Human Embryonic Development**

**COURSE CODE : GENEC201**

**UNIT VALUE : 0.50**

**DATE : 28-APR-05**

**TIME : 14.30**

**TIME ALLOWED : 3 Hours**

# **HUMAN EMBRYONIC DEVELOPMENT – GENE201**

## **28<sup>th</sup> April 2005**

There are two sections to this exam.

The short answer section makes up 25% of the mark for this paper.

The essay section counts for 75% of the mark (25% each essay).

### **Section 1 - SHORT ANSWER SECTION**

This section makes up 25% of your exam mark.

1. Write short notes on ALL of the following:

- a. Embryonic stem cells
- b. Gastrulation
- c. Placenta
- d. The limb bud
- e. The abnormal kidney
- f. HOX genes

### **Section 2 - ESSAY SECTION**

Answer THREE essays from this section (25% each).

Each essay counts as 25% of the examination.

1. Compare and contrast male and female gametogenesis.
2. Write an essay on Assisted Reproductive Technologies. What developments have occurred in the last 10 years?
3. Describe the development of the early embryo, starting at fertilisation and ending at the implanting blastocyst.
4. Describe the normal and abnormal development of the brain and central nervous system, emphasising the genes that are involved.
5. Describe the normal and abnormal development of the heart, emphasising the genes that are involved.
6. Describe the normal and abnormal development of the gonads, emphasising the genes and hormones that are involved.

**END OF PAPER**