

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:-

M.Sc.

M.Sc. Prenatal Genetics & Fetal Medicine: Human Genetics

COURSE CODE : PGFM0001

DATE : 06-MAY-03

TIME : 14.30

TIME ALLOWED : 3 Hours

MSc in Prenatal Genetics and Fetal Medicine
Human Genetics
6th May 2003

There are two sections to this exam.

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

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

Section 1 - SHORT ANSWER SECTION

This section makes up 25% of the examination.

1. Write short notes on ALL of the following

- a) The organisation of DNA in a cell
- b) G banding
- c) Robertsonian translocations
- d) Inborn errors of metabolism
- e) Genetic basis of cancer
- f) Trinucleotide repeat disorders

Section 2 - ESSAY SECTION

Answer three essays from this section.

Each essay counts for 25% of the examination.

1. Outline the different types of structural chromosome abnormalities and how they lead to problems during meiosis.
2. Write an essay on the use of pedigree analysis in human genetics.
3. Describe the technology used to locate and isolate human genes. How has this helped with the human genome project?
4. Describe the genetic aspects of TWO of the following:
 - (a) X linked disorders
 - (b) The haemoglobinopathies
 - (c) Cystic fibrosis
5. Discuss the ethical problems that arise as a result of developments in human genetics. What problems may arise in the future?

END OF PAPER