

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES**  
**THIRD YEAR SECOND SEMESTER EXAMINATION- JAN 2013**  
**MLSBM 3203 BIOTECHNOLOGY AND MOLECULAR BIOLOGY**

**PAPER II**

**DATE: 23.01.2013**

**TIME: 2 HOURS**

**ANSWER ALL SIX QUESTIONS.**

1. Write notes on primers used in the routine polymerase chain reaction. (100 Marks)
2. Write notes on principle(s) of Restriction Fragment Length Polymorphism (RFLP) method. (100 Marks)
3. Write notes on the application of gel electrophoresis technique in DNA analysis. (100 Marks)
4. Describe the basic steps involved in the “G” banding chromosomal analysis (100 marks)
5. Describe the structural chromosomal abnormalities (100 Marks)
6.
  - 6.1. Define the term Molecular cloning. (10 Marks)
  - 6.2. Name the enzyme used in the molecular cloning and state the role of each in molecular cloning. (40 Marks)
  - 6.3. Briefly describe the basic steps involved in the procedure of cloning a foreign DNA using a plasmid vector. (50 Marks)