



UNIVERSITY OF JAFFNA
BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES
THIRD YEAR FIRST SEMESTER EXAMINATION- FEBRUARY 2017

MLSBM 3131 BIOTECHNOLOGY AND MOLECULAR BIOLOGY I

Date: 13.02.2017

Time: 1 hour

Answer all four questions.

1.
 - 1.1
 - 1.1.1. List the different types of enzymes and proteins involved in DNA replication. (15 Marks)
 - 1.1.2. Give the functions of the enzymes and proteins mentioned above. (25 Marks)
 - 1.2. Briefly describe the steps involved in DNA fingerprinting to identify biological father of a child among five subjects. (60 Marks)
2.
 - 2.1. Define the term gene cloning. (15 Marks)
 - 2.2. Briefly describe the steps involved in the procedure of gene cloning using a plasmid vector. (65 Marks)
 - 2.3. List four applications of gene cloning. (20 Marks)
3.
 - 3.1. Describe the principle and steps involved in Polymerase Chain reaction (PCR) (60 marks)
 - 3.2 Write notes on Nucleic acid blotting techniques (40 marks)

4. Write short notes on

4.1. Down syndrome

(30 Marks)

4.2. Base excision DNA repair

(30 Marks)

4.3. Point mutation with one example

(40 Marks)