



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA  
B.Sc. Medical Laboratory Science Degree Programme  
Year End Examination – Year 3, 4<sup>th</sup> Batch

Biotechnology (MLS 3104) SEQ

Date: 05<sup>th</sup> February 2016

Time: 10.30 am-11.30 am

Duration: 01 hour

Answer all questions.

1. A “Gene Library” is a collection of different DNA sequences from an organism, each of which has been cloned into a vector for ease of purification, storage and analysis.

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1.1 What are the reasons for missing of some nucleotide sequences from the original DNA sequence when preparing gene libraries? (20 marks)

1.2 List the types of gene libraries. (10 marks)

1.3 Briefly explain one of the libraries mentioned in 1.2. (40 marks)

1.4 Briefly describe the “Southern Blotting technique” used in gene library screening. (30 marks)

2. “Dolly, the first mammal cloned from a somatic cell opened a new era in Biotechnology.”

2.1 Describe the term Transgenesis. (15 marks)

2.2 Briefly describe the sperm mediated gene transfer method (15 marks)

2.3 Explain the basis of the method that gave birth to Dolly. (40 marks)

2.4 List the benefits of the method explained in 2.3 (30 marks)



