



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES, MIHINTALE.**

**B.Sc. (Special) Degree in Applied Biology
Fourth year – Semester I Examination – October/November 2017**

BIO 4101 BIODEIVERSITY AND BIOTECHNOLOGY

Time: One and a half (1 ½) hours

Answer THREE (03) questions only

1. List three examples for using phylogenetic analyses in studies relating to biodiversity and discuss the importance creating phylogenies in each of these studies. **(50 marks)**
2. List risks and controversies associated with using genetically modified organisms and discuss how advances in research and improved safety can mitigate these risks and controversies. **(50 marks)**
3. Explain briefly the method used to generate DNA barcodes and discuss the impact of DNA barcoding on biodiversity conservation. **(50 marks)**
4. a) List 5 transgene detection methods **(10 marks)**
 a) Describe challenges for detection of GMFs (genetically modified food). **(15 marks)**
 b) Design a quantitative method to detect the genetic modification achieved with the following DNA fragment. **(25 marks)**



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