

## FACULTY OF ALLIED HEALTH SCIENCES, UNIVERSITY OF RUHUNA Department of Medical Laboratory Science

Year End Examination, Year 3 – 2015/2016 (9th) Batch MLS 3104 Biotechnology – SEQ

Date: 29<sup>th</sup> of March 2021 Answer all questions

Time: 10.15 a.m. – 11.15 a.m.

Duration: 01 hour

Index Number: .....

1. Enzymes are widely used in many biotechnological applications (Food & Brewing industry, Pharmaceutical industry, Paper & pulp industry.... etc.).

1.1 List **four** industrial enzymes and state their function.

(20 marks)

1.2 Discuss advantages and disadvantages of use of enzymes in industries.

(30 marks)

1.3 State **two** laboratory methods which are used for high resolution (10 marks) purification of enzymes.

1.4 Describe **one** of the methods mentioned in 1.3.

(40 marks)

2.

2.1 What i	s meant by a transgenic?	(05 marks)
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2.2 Name three transgenic techniques.

(15 marks)

2.3 Describe one modification which occurs in transgenic fish.

(10 marks)

2.4

2.4.1 Name **four** molecular analyzing methods of human diseases and (20 marks) state **two** advantages of molecular analysis.

2.4.2 Describe gene therapy.

(10 marks)

2.4.3 Explain the **two** methods of gene therapy.

(30 marks)

2.4.4 State **four** disadvantages of gene therapy.

(10 marks)