



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA
B.Sc. Medical Laboratory Science Degree Programme
Year End Examination - Year 3
3rd Batch – Essay – Biotechnology (MLS 3104)

Date: 28th September 2015

Time: 2.00-3.00pm

Duration: 01 hour

Index Number:

Answer all the questions

4

1.
 - 1.1 State the function of following agents used in DNA isolation. (20 marks)
 - a. Sodium dodecyl sulphate
 - b. Urea
 - c. Chelating agents
 - d. Protease
 - e. RNase
 - 1.2 Describe two methods used to isolate genomic DNA. (30 marks)
 - 1.3 List the two methods practiced in RNA isolation and briefly explain one of them (30 marks)
 - 1.4 a) Absorbance of the 1 in 10 diluted DNA sample at 260nm and 320nm are 0.409 and 0.124 respectively. If the absorbance unit of the DNA is 50µg/mL, find the concentration of this isolated DNA sample. (10 marks)
b) Absorbance at 280nm of this sample is 0.270. Comment on the purity of this DNA sample. (10 marks)
2.
 - 2.1 Define the terms;
 - a). Transgenic (05 marks)
 - b). Transgene (05 marks)
 - 2.2 Describe two methods used in gene transfer in animal. (40 marks)
 - 2.3 Briefly describe the Semen sexing procedure by Fluorescence Activated Cell Sorting technique. (20 marks)
 - 2.4 Write a short note on "Cloning". (30 marks)