

Salahaddin University- Erbil
College of Agricultural Engineering Sciences
Department of Animal Resources



subject: P. of Biotechnology
data: 14\ 05\ 2022
Time: 1 hour

Second Practical Examination, 4th Stage Students, 2nd Semester 2021-2022

Maximum Marks: 90

Q1) Answer the following branches:

A) Write functions (three) of the following terms? (12 Marks)
(Power supply, Micropipette, Gel loading dye, and Buffer solution)

B) Write the components require for the PCR reaction? (12 Marks)

Q2) Answer the following branches:

A) Write the PCR cycling conditions? (15 Marks)

B) What are the major factors of travel of the particle in gel Electrophoresis? (10 Marks)

Q3) Write four points of applications of the following terms? (16 Marks)

(Gel electrophoresis and PCR)

Q4) Answer the following branches:

A) How many grams of Tris-HCl would you need to prepare 60mL of a (0.5M) solution? The Molecular weight of Tris-HCl is 121.1 g/mol. (13 Marks)

B) Calculate how many mL of a (1.0 M) stock solution of NaCl are needed to prepare 100 mL of a (50 mM) solution. (12 Marks)

ALL THE BEST

Mr. Hemin Hussein Ali
Practical Lecturer
Department of Animal Resources