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



Subject:MolecularGeneticsStage:2Time:1 hourDate:18 /4/2021

(15 Marks)

## First Monthly Examination, Second Semester - 2020-2021

Q1/ Answer these questions briefly

- 1. Mention the chemical materials in 6X loading dye in electrophoresis with their function.
- 2. Buffer is....
- 3. What is the electrical charge of DNA? Why?

4. A ..... is dissolved in ..... to make a .....

- 5. What is the meaning of 10X solution?
- 6. DNA extraction is used to.....,
- 7. The movement of particles under electric field in a fluid is called (Electrolytic, Ladder, Electrophoresis).
- 8. Why plant genomic DNA is more difficult to extract than animal genomic DNA?
- 9. What is the function of EtBr?
- 10. Parts of electrophoresis equipment are ....., ...., ...., ....,

Q2/ Answer one of these questions.

## A/ What are the chemical materials used in DNA extraction? And mention their functions.B/ Less concentration of agarose gel used to separate large fragments of DNA while high concentration used for small fragments. Why?

Q3/ Answer these questions.

## (10 Marks)

(5 Marks)

A/What is melting temperature of DNA in PCR? Find the melting temperature of this sequence (GTGCCATTGATCTTGG).

B/ Describe the role of Taq polymerase in amplifying the DNA.

Asst. Lecturers

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