

UNIVERSITY OF JAFFNA, SRI LANKA

BACHELOR OF PHARMACY

FOURTH YEAR FIRST SEMESTER EXAMINATION – OCTOBER 2019

PHABT 4144 PHARMACEUTICAL BIOTECHNOLOGY

Date: 07.11.2019

Time: 2 hours

PART II

Answer all six questions

1.

1.1 What are the applications of southern blotting? (20Marks)

1.2 Define the following terms

1.2.1 Denaturing Electrophoresis (10 Marks)

1.2.2 Electroelution (10Marks)

1.3 Describe the separation technique (electrophoresis), transfer process and hybridization process of western blotting (60Marks)

2.

2.1 What are the problems with Killed vaccine? (20Marks)

2.2 Define the “Passive Immunity” and mention the limitations of antisera (30Marks)

2.3 Briefly describe the Hybridoma technique used to produce Monoclonal Antibody (50Marks)

3.

3.1 List the application of papain (20 Marks)

3.2 Describe the collection of papaya latex and steps used in the isolation of papain from latex. (50Marks)

3.3 Give the principle and describe an experimental method to estimate the activity of papain. (30 Marks)

4.

- 4.1 How the agarose gel concentration affects the migration of DNA fragments? (20 Marks)
- 4.2 What are the merits and demerits of Agarose Gel Electrophoresis? (30 Marks)
- 4.3 Explain the uses of Recombinant DNA Technology (50 Marks)

5.

- 5.1 Explain the ranges of Fermentation process (50 Marks)
- 5.2 Explain the production of Citric acid by fermentation process (50 Marks)

6.

- 6.1 List the 04 examples of Restriction Endonuclease (20 Marks)
- 6.2 What are the properties of Expression vector? (30 Marks)
- 6.3 Briefly describe the PCR (Polymerase Chain Reaction) technique (50 Marks)