



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

FOURTH BPHARM PART I EXAMINATION – JUNE 2022

PH 4141 CELL BIOLOGY & IMMUNOLOGY – SEQ

TIME: TWO HOURS

INSTRUCTIONS

- There are **four** questions in this paper.
- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

1.

- 1.1. List the components of an organized mammalian cell mentioning each of its function. *(20 marks)*
- 1.2. Briefly explain the “synaptic signaling” *(40 marks)*
- 1.3. Compare two receptor types involved in cell signaling process. *(40 marks)*

2.

- 2.1. List five uses of monoclonal antibodies. *(25 marks)*
- 2.2. What are the three main mechanism of antibody action? *(15 marks)*
- 2.3. Explain the below terms related to antibody-antigen interaction. *(30 marks)*
- 2.3.1. Affinity
- 2.3.2. Avidity
- 2.3.3. Cross reactivity
- 2.4. Describe the basic structure of an antibody. *(30 marks)*

3.

- 3.1. State five cells associated with immune responses. (30 marks)
- 3.2. What is cell mediated response in adaptive immunity? (15 marks)
- 3.3. Write three main mechanisms in innate immunity. (15 marks)
- 3.4. Write five differences between innate immunity and adaptive immunity. (40 marks)

4.

- 4.1. Define the term "hypersensitivity". (10 marks)
- 4.2. What is meant by "autoimmunity"? (10 marks)
- 4.3. Mention the difference of response time in four hypersensitivity types. (20 marks)
- 4.4. Write a short account on "Type II hypersensitivity". (30 marks)
- 4.5. Briefly explain how cancer cells are deviated from normal cell regulatory pathways. (30 marks)

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