



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

SECOND BPHARM PART I EXAMINATION – JANUARY/FEBRUARY 2022

PH 2134 PATHOLOGY AND PHARMACOLOGY I – SEQ PAPER

TIME: THREE HOURS

INSTRUCTIONS

- There are six questions in part A, B and C in this SEQ paper.
- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

PART A

1.

- 1.1 Name two Angiotensin converting enzyme (ACE) inhibitors. (10 marks)
- 1.2 Write two indications for ACE inhibitors. (10 marks)
- 1.3 Explain the mechanism of action of ACE inhibitors. (36 marks)
- 1.4 List four contraindications of ACE inhibitors. (12 marks)
- 1.5 Angiotensin receptor antagonist is an alternative for patients who are allergic to ACE inhibitors. Justify the statement. (32 marks)

2.

2.1

- 2.1.1 Name two statins. (10 marks)
- 2.1.2 Explain mechanism of action of statins. (36 marks)
- 2.1.3 Write two cautions that need to be taken when using statins. (04 marks)

PART B

2.2 Write a short note on the following.

- 2.2.1 Alpha-adrenergic blockers (25 marks)
- 2.2.2 Therapeutic effects of epinephrine (25 marks)

PART C

3.

- 3.1 What is meant by 'plasma half-life' of a drug? (10 marks)
- 3.2 Describe the factors that affect distribution of drugs in biological fluids. (40 marks)
- 3.3 Write five sites of drug metabolism in the human body. (15 marks)
- 3.4 Briefly discuss the term 'therapeutic index' using graphical representations where necessary. (35 marks)

4.

- 4.1 State the two types of cholinergic receptors. (10 marks)
- 4.2 Briefly explain the mechanism of action of direct acting cholinergic agonists (reversible). (30 marks)
- 4.3 Write two indications and two adverse events for each of the following indirect acting cholinergic agonists.
 - 4.3.1 Physostigmine (16 marks)
 - 4.3.2 Neostigmine (16 marks)
- 4.4. What is the pharmacokinetic difference between atropine and hyoscine? (28 marks)

5.

- 5.1 List five cellular adaptations following a cell injury and give one example for each. (20 marks)
- 5.2 Differentiate between the five cellular adaptations that you listed in 5.1. (40 marks)
- 5.3 What is the definition of an inflammation? (10 marks)
- 5.4 Briefly explain the morphologic patterns of an acute inflammation. (30 marks)

6.

- 6.1 What is the definition of a Type I Hypersensitivity reaction? (10 marks)
- 6.2 Briefly describe the mechanism of action of Type I Hypersensitivity reactions. (30 marks)
- 6.3 List the two main types of immunities and differentiate between those two. (20 marks)
- 6.4 Briefly describe the Immunopathological Mechanisms of HIV infection. (40 marks)

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