



UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

SECOND B.PHARM PART 1 EXAMINATION - JANUARY 2015

PH 2134 – PATHOLOGY AND PHARMACOLOGY I (SEQ)

TIME: THREE HOURS

INSTRUCTIONS

- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.

- 1.1. Briefly describe
- 1.1.1. Phases of clinical trials (25 marks)
 - 1.1.2. Apparent volume of distribution (25 marks)
- 1.2. Explain the pharmacological basis of using
- 1.2.1. Digoxin in atrial fibrillation (25 marks)
 - 1.2.2. Nicorandil in stable angina (25 marks)

2. Describe the mode of action of

- 2.1. Adrenaline (20 marks)
- 2.2. Atropine (20 marks)
- 2.3. Frusemide (20 marks)
- 2.4. Captopril (20 marks)
- 2.5. Nifedipine (20 marks)

3. A 62 year old patient who was on long term furosemide for heart failure was recently prescribed diclofenac sodium (a NSAID) for joint pain.

- 3.1. Describe the mechanism of action of furosemide in the management of heart failure. (50 marks)
- 3.2. Critically evaluate the above drug combination. (25 marks)
- 3.3. How would you advise this patient? (25 marks)

4.

4.1.

- 4.1.1. List the **two** groups of elimination kinetics. (05 marks)
- 4.1.2. Give **one** example for each group you mentioned in 4.1.1. (05 marks)
- 4.1.3. Compare the differences between two groups of elimination kinetics you mentioned in 4.1.1 (40 marks)

4.2.

- 4.2.1 Describe the mode of action of atropine. (15 marks)
- 4.2.2 List the clinical indications of atropine. (10 marks)

4.3.

- Compare and contrast physostigmine and neostigmine. (25 marks)

5.

5.1. What is acute inflammation? (10 marks)

5.2. What are the cardinal features of acute inflammation? (10 marks)

5.3. Give **five** mediators derived from arachidonic acid and their function in relation to acute inflammation. (25 marks)

5.4. List **three** drugs which reduce inflammatory response by interfering with arachidonic acid metabolites and give the site of action of each of them. (15 marks)

5.5. What are the sequale of acute inflammation? (20 marks)

5.6. What are the characteristic features of chronic inflammation? (20 marks)

6.

6.1. List **four** causes for hypersensitivity reactions. (10 marks)

6.2. Classify and state different types and mechanisms of hypersensitivity reactions. (20 marks)

6.3. List different cell types which are involved in different types of hypersensitivity reactions. (20 marks)

6.4. Discuss how immunity is important for disease (disease prevention, control and generation) giving examples. (40 marks)

6.5. State **two** drugs and their actions which are useful in treating hypersensitivity reactions. (10 marks)