



UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

FOURTH BPHARM PART II EXAMINATION – JUNE 2017

PH 4213 ADVANCED MEDICINAL CHEMISTRY II (SEQ)

TIME: TWO HOURS

INSTRUCTIONS

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

1. Answer **all** parts.

- 1.1. Briefly describe the chemistry of “calcium channel blockers”. (40 marks)
- 1.2. Explain the Structure-Activity Relationship of thiazide diuretics. (40 marks)
- 1.3. Briefly explain the molecular mechanism of “Loop Diuretics”. (20 marks)

2. Answer **all** parts.

- 2.1. Explain the role of the “zinc atom” in the development of angiotensin converting enzyme inhibitors. (50 marks)
- 2.2. Briefly explain structural features of statins. (25 marks)
- 2.3. Outline vitamin K dependant mechanism of warfarin. (25 marks)

3. Answer **all** parts.

3.1.

3.1.1. Identify the pharmacodynamic “pharmacopore” present in the Figure A below.

(10 marks)

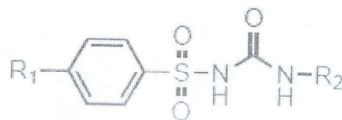


Figure A

- 3.1.2. State the therapeutic use of compounds belonging to the pharmacopore mentioned in 3.1.1 above. (10 marks)
- 3.1.3. Classify compounds belonging to the pharmacopore mentioned in 3.1.1 above. (20 marks)

3.2. Briefly explain the chemistry of clinically useful Thionamides. (30 marks)

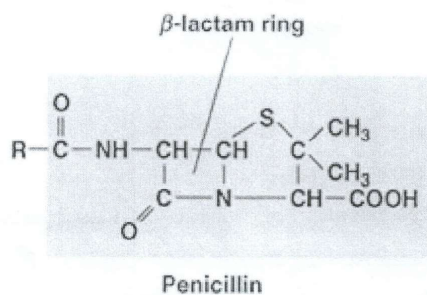
3.3. State chemical classification of Non-Steroidal Anti-Inflammatory Agents (NSAIA). (30 marks)

4. Answer **all** parts.

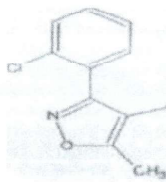
4.1. Draw the structures of sulphonamide and the structural analogue of sulphonamide. (10 marks)

4.2. Briefly describe the structure activity relationship (SAR) of sulphonamide. (30 marks)

4.3. The given structure is the common structure for penicillin.



Give the name and structure of derived antibiotic when R group is substituted by following chemical group. (10 marks)



4.4. Briefly explain the structure activity relationship (SAR) of cephalixin with the structure. (20 marks)

4.5. Briefly explain the structure activity relationship (SAR) of Quinolone with the common structure. (30 marks)

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