



**UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES**

**DEPARTMENT OF PHARMACY**

**THIRD BPHARM PART I EXAMINATION – OCTOBER/NOVEMBER 2019**

**PH 3153 PHARMACOLOGY III (SEQ)**

**TIME: THREE HOURS**

**INSTRUCTIONS**

- Answer **all** questions in part A, B and C in separate booklets provided.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

**Part A**

**1.**

1.1. List **two** examples for each of the following.

1.1.1. Proton pump inhibitors (10 marks)

1.1.2. Antacids (10 marks)

1.2. Describe the mechanism of action of proton pump inhibitors. (20 marks)

1.3. Antimicrobial agents are used in the treatment of peptic ulcers in certain situations.

1.3.1. What is the specific objective of the above treatment? (05 marks)

1.3.2. Briefly describe the peptic ulcer treatment regimens containing antimicrobial agents. (40 marks)

1.3.3. As a pharmacist what are your special considerations when dispensing above regimens? (15 marks)

**Part B**

**2.**

2.1. List **four** categories of oral hypoglycemic agents and give **one** example for each category. (20 marks)

2.2. Briefly explain the mechanism of action of insulin. (25 marks)

2.3. List **three** adverse effects of insulin. (09 marks)

2.4. List **two** contraindications for insulin. (06 marks)

2.5. Briefly explain how you would manage a situation if a regular user of insulin falls ill. (15 marks)

2.6. State the mode of action of sulphonylureas and give **two** examples each for the first and second generations sulphonylureas. (25 marks)

3. Write an example for the following categories of bronchodilators. (20 marks)
- 3.1.1. Short acting  $\beta_2$  agonists
  - 3.1.2. Long acting  $\beta_2$  agonists
  - 3.1.3. Antimuscarinic bronchodilators
  - 3.1.4. Theophylline derivatives
- 3.2. List **five** adverse effects of  $\beta_2$  agonists. (15 marks)
- 3.3. Explain the mechanism of action of antimuscarinic bronchodilators. (25 marks)
- 3.4. Write short notes on the following:
- 3.4.1. Mucolytics (20 marks)
  - 3.4.2. Expectorants (20 marks)
4. State the mechanism of action, **two** side effects and **two** contraindications of the following:
- 4.1. Synthetic estrogens (25 marks)
  - 4.2. Synthetic progestins (25 marks)
  - 4.3. Oxytocin (25 marks)
  - 4.4. Combine oral contraceptives (25 marks)

### Part C

5. Describe the mechanism of actions of tetracycline and penicillin. (40 marks)
- 5.2. Briefly explain the pharmacokinetics of tetracycline. (20 marks)
  - 5.3. State the mechanism of action and **two** side effects of
    - 5.3.1. chloramphenicol (20 marks)
    - 5.3.2. neomycin (20 marks)
6. Giving **two** examples, describe briefly the use of topical corticosteroids in dermatological conditions. (25 marks)
- 6.2. Using a flow diagram, explain the mechanism of bone mineral homeostasis. (25 marks)
  - 6.3. State pharmacokinetics, **one** clinical use and **one** contraindication of
    - 6.3.1. ciprofloxacin (25 marks)
    - 6.3.2. co-trimoxazole (25 marks)

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