



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

**DEPARTMENT OF PHARMACY**

**THIRD BPHARM PART I EXAMINATION – JANUARY 2023**

**PH 3153 PHARMACOLOGY III – SEQ PAPER**

**TIME: THREE HOURS**

**INSTRUCTIONS**

- There are **six** questions in part **A, B, C** and **D** 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**

01.

- 1.1 List two parenteral anticoagulants. **(10 marks)**
- 1.2 Briefly describe the mechanism of action of one drug you mentioned in 1.1. **(20 marks)**
- 1.3 Write the main function of haemopoietic growth factors and state two haemopoietic growth factors used clinically. **(20 marks)**
- 1.4 Describe the mechanism of action of dipyridamole. **(30 marks)**
- 1.5 List four clinical indications of streptokinase. **(20 marks)**

02.

- 2.1. Cimetidine works on gastric parietal cells.
  - 2.1.1. Briefly explain the mechanism of action of cimetidine. **(20 marks)**
  - 2.1.2. State three indications of cimetidine. **(15 marks)**
- 2.2. List two indications, two side effects and two contraindications of systemic retinoids. **(30 marks)**
- 2.3. List four categories of bronchodilators giving one example for each category. **(20 marks)**
- 2.4. Compare sedative expectorants and stimulant expectorants in terms of their mode of action. **(15 marks)**

**PART B**

03.

- 3.1 Name five drug groups that can be used as laxatives. (25 marks)
- 3.2 Briefly explain the mode of action of one drug group you mentioned in 3.1. (20 marks)
- 3.3 Write one example for each drug group. (20 marks)
- 3.4 Mention two major side effects of loop diuretics. (10 marks)
- 3.5 Write the mode of action of vasopressin. (15 marks)
- 3.6 Name one synthetic analog of vasopressin. (10 marks)

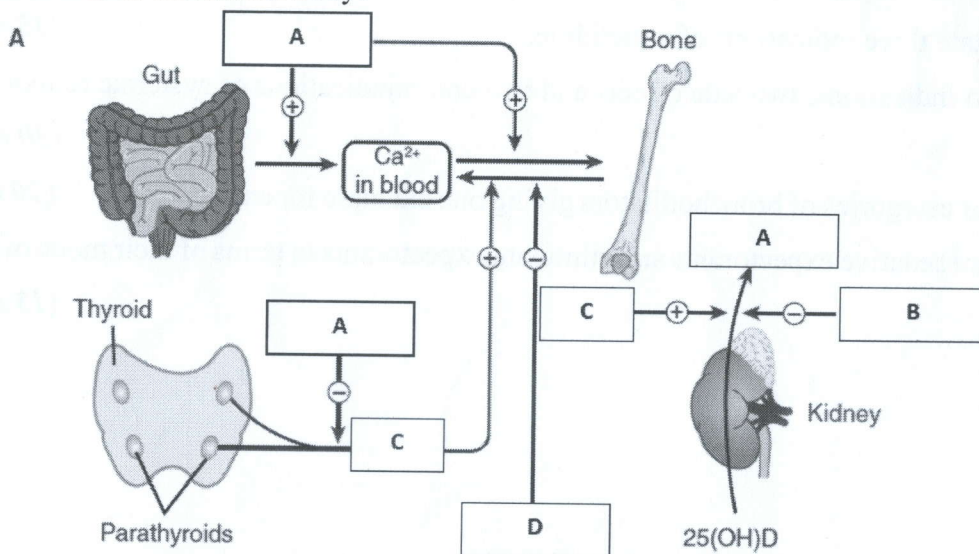
04.

- 4.1 Briefly explain the mode of action of metformin. (20 marks)
- 4.2 Classify insulin preparations giving one example for each type. (20 marks)
- 4.3 Write two common side effects of insulin. (10 marks)
- 4.4 List two relative and two absolute contraindications of oral contraceptive pills. (20 marks)
- 4.5 Write four hormones available in progestin-only contraceptive pills. (10 marks)
- 4.6 Explain the missed pill management of progestin only pills to a woman who takes this pill for the first time. (20 marks)

**PART C**

05.

5.1. The following figure shows some important hormones which responsible for calcium homeostasis in the human body.



- 5.1.1. Name A, B, C and D hormones. (12 marks)
- 5.1.2. Briefly describe mechanism of action of C on kidneys. (15 marks)
- 5.2.
- 5.2.1. Briefly explain mechanism of action of oxytocin in uterine contraction. (15 marks)
- 5.2.2. List two other uterine stimulant drugs which is used for postpartum hemorrhage. (10 marks)
- 5.3.
- 5.3.1. Define the term “Selective Estrogen Receptor Modulators (SERMs)”. (08 marks)
- 5.3.2. List three clinically used SERMs. (15 marks)
- 5.3.3. Name the SERM used as a prophylactic therapy for women in high-risk with breast cancers and briefly describe its mechanism of action. (25 marks)

#### PART D

- 06.
- 6.1 List four main mechanisms of bacterial resistance. (08 marks)
- 6.2 Briefly explain the selective toxicity of antibiotics in neonates. (10 marks)
- 6.3 List one indication and two key side effects for each of the following antibiotics. (32 marks)
- 6.3.1 Nystatin
- 6.3.2 Gentamicin
- 6.3.3 Quinolone
- 6.3.4 Carbapenems
- 6.4 Briefly explain the mechanism of actions of following drug combinations. (50 marks)
- 6.4.1 Sulfamethoxazole and trimethoprim
- 6.4.2 Amoxicillin and clavulanic acid

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