



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

THIRD BPHARM PART II EXAMINATION –NOVEMBER 2022

PH 3212 PHARMACOLOGY IV AND TOXICOLOGY- SEQ PAPER

TIME: TWO HOURS

INSTRUCTIONS

- There are **four** questions in part **A, B, C** and **D** in this SEQ paper.
- Answer each part in separate booklet 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. Zidovudine is an antiviral medication use in treatment of HIV.
 - 1.1.1. Write the antiviral drug category of zidovudine. (05 marks)
 - 1.1.2. Describe the mechanism of action of zidovudine. (24 marks)
 - 1.1.3. Name four antiviral medicine categories use in treatment of HIV other than the category you mentioned 1.1.1. Give one example for each of the categories you mentioned. (16 marks)
 - 1.2. Isoniazid is an antibacterial medicine used in treatment of tuberculosis.
 - 1.2.1. List three other first-line antituberculosis medications. (15 marks)
 - 1.2.2. Describe below pharmacological properties of isoniazid. (40 marks)
 - 1.2.2.1. Mechanism of action
 - 1.2.2.2. Pharmacokinetic properties
 - 1.2.2.3. Adverse drug reactions
 - 1.2.2.4. Contraindications

PART B

2.
 - 2.1. Filariasis is caused by the filarial worm *Wuchereria bancrofti*.
 - 2.1.1. List the five types of clinical manifestations of filariasis. (20 marks)
 - 2.1.2. What is the drug of choice for filariasis? (05 marks)
 - 2.1.3. Briefly explain the mechanism of action of the drug you mentioned in 2.1.2. (15 marks)
 - 2.1.4. Briefly explain the aim and recommended drug regimen of the mass treatment for filariasis. (15 marks)
 - 2.2. Antimalarial agents are the drugs used for the treatment or prophylaxis of malaria.
 - 2.2.1. Briefly explain the mechanism of action of quinine. (15 marks)

2.2.2. Write two antimalarial drugs used as prophylaxis agents for people who are traveling to malaria risk areas. (05 marks)

2.2.3. Briefly explain the advices you should give as a pharmacist when dispensing the drugs, you mentioned in 2.2.2. (25 marks)

3.

3.1.

3.1.1. Briefly explain the general principles of immunosuppression in organ transplant therapy. (20 marks)

3.1.2. Briefly describe the mechanism of action of calcineurin inhibitors. (20 marks)

3.1.3. Write two indications of calcineurin inhibitors. (10 marks)

3.2.

3.2.1. Briefly discuss four actions of serotonin. (20 marks)

3.2.2. List four pharmacokinetic properties of H₁ receptor antagonists. (20 marks)

3.2.3. State four eicosanoids that are important as local hormones. (10 marks)

PART C

4.

4.1. Briefly describe the mode of action of deferoxamine used for acute iron poisoning. (15 marks)

4.2. A six-year-old female patient was admitted to the emergency room after ingestion of a methanol contained perfume. Briefly describe the mechanism of toxicity of methanol. (20 marks)

4.3. A forty-year-old woman was admitted to an emergency department, 10-15 min after having lunch containing processed meat. The woman reported a cold sensation and presented cyanotic lips, chest constriction and tachycardia. Upon a reading of the results of the laboratory tests and patient history, the patient was diagnosed with food poisoning.

4.3.1. Write the food additive that is more likely to responsible for the above incident. (07 marks)

4.3.2. List two other toxic effects of the food additive mentioned in the 4.3.1. (08 marks)

PART D

4.4.

4.4.1. List five highly venomous snakes found in Sri Lanka. (10 marks)

4.4.2. State two common features use to identify each of the highly venomous snakes that you listed in 4.4.1. (10 marks)

4.4.3. Describe the things/procedures that you “should do” and “should not do” followed by a snake bite. (30 marks)

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