



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

THIRD BPHARM PART II EXAMINATION – DECEMBER 2021

PH 3212 PHARMACOLOGY IV AND TOXICOLOGY (SEQ)

TIME: TWO HOURS

INSTRUCTIONS

- There are **four** questions in part **A, B** and **C** 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. Medications used in mycoses are azole and polyene antifungals.
 - 1.1. Name the two types of azole antifungals. (05 marks)
 - 1.2. Write two examples for each of the types you mentioned in 1.1. (10 marks)
 - 1.3. Amphotericin B is used to treat systemic fungal infections.
 - 1.3.1. Describe the mechanism of action and pharmacokinetic properties of Amphotericin B. (40 marks)
 - 1.3.2. List four adverse reactions of Amphotericin B. (10 marks)
 - 1.3.3. Write two possible drug interactions of Amphotericin B. (10 marks)
 - 1.3.4. A doctor decided to start Amphotericin B IV infusion to an inward patient with systemic fungal infection. If you are the pharmacist in-charge in this ward, write your instructions to the healthcare team regarding initiation of this medication. (25 marks)

2.
 - 2.1. List three medications used in multi drug therapy to treat leprosy. (15 marks)
 - 2.2. A 35-year-old male person was recently diagnosed as lepromatous leprosy. Explain the multi drug therapy regimen that can be used to treat the condition of this patient. Draw diagrams where necessary. (35 marks)
 - 2.3.
 - 2.3.1. Briefly describe the pharmacological basis of using cyclosporin in organ transplant. (25 marks)
 - 2.3.2. List five common adverse effects of cyclosporin (15 marks)
 - 2.3.3. Name two medications that can be used instead of cyclosporin in organ transplant (10 marks)

3.

- 3.1. Name four antihistamines act on H1 histamine receptors. (10 marks)
- 3.2. List three common indications for antihistamines you mentioned in 3.1. (15 marks)
- 3.3. Write a short note on peptide autocooids. (25 marks)

PART B

3.4. A single overdose of paracetamol in more than 200 mg/kg body weight can be potentially fatal.

- 3.4.1. List two antidotes that can be used to treat paracetamol toxicity. (10 marks)
- 3.4.2. Briefly describe the management of paracetamol toxicity using Rumack-Matthew nomogram. (15 marks)
- 3.4.3. Describe the mechanism of toxicity of paracetamol. (25 marks)

4.

- 4.1. List five types of Organophosphates which cause poisoning in Sri Lanka. (10 marks)
- 4.2. Name three phases of Organophosphates Poisoning according to clinical features. (15 marks)

PART C

4.3. State the difference between acute, sub-acute and chronic toxicity. (15 marks)

4.4. A 35-year-old, male presents to the hospital with approximately 02 months of progressive fatigue, low appetite, and "stocking-glove" pattern of numbness and tingling in his toes and fingertips. Dermatologic examination reveals brown patches of hyperpigmentation appeared around the axillae, groin, nipples, and neck. The palms and soles show multiple hyperkeratotic corn-like elevations.

His family and occupational history suggested that the patient has been a carpenter since completing high school 17 years ago. For the last 10 years, he has lived in a rural, farming area. He has been taking normal diet and consumed underground water. Medical investigation concluded that, patient has been exposed to a heavy metal for a long period of time.

- 4.4.1. State the heavy metal more likely to affect this patient. (10 marks)
- 4.4.2. List two potential sources for the heavy metal exposure. (05 marks)
- 4.4.3. Suggest two chelation therapy for this patient. (10 marks)
- 4.5. Methyl alcohol (methanol) intoxication commonly occurs via oral ingestion of illicit or adulterated liquors or as ethanol substitution.
- 4.5.1. List four symptoms of methyl alcohol intoxication. (10 marks)
- 4.5.2. List two drugs used for the treatment of methanol poisoning. (05 marks)
- 4.5.3. Briefly describe the mode of action of two drugs you mentioned in 4.5.2. (10 marks)