



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

THIRD BPHARM PART II EXAMINATION – JUNE 2026

PH 3212 PHARMACOLOGY (IV) AND TOXICOLOGY – SEQ

TIME: TWO HOURS

INSTRUCTIONS

- There are **four** questions in parts **A and B** of 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

1. Ivermectin is an FDA-approved, antiparasitic drug used in the treatment of several nematode infections.
 - 1.1. Name four other drugs that are effective against nematode infections. (10 marks)
 - 1.2. Briefly describe the mechanism of action of ivermectin against nematodes. (30 marks)
 - 1.3. List three clinical indications for the use of ivermectin. (10 marks)
 - 1.4. Mention four adverse effects associated with ivermectin therapy. (10 marks)
 - 1.5. Briefly describe why ivermectin is contraindicated in patients with meningitis. (15 marks)
 - 1.6. Concomitant use of ivermectin and diazepam (benzodiazepine) is not recommended. Justify the statement. (25 marks)

2. Effective antiviral therapies are available for certain viral respiratory tract infections, including those caused by influenza A and B viruses and respiratory syncytial viruses (RSV).
 - 2.1. Briefly describe the mechanism of action of oseltamivir in the management of influenza A and B. (30 marks)
 - 2.2. List two adverse drug reactions associated with oseltamivir and state one strategy that may be used to minimize these adverse drug effects. (10 marks)
 - 2.3. State why zanamivir should be avoided in patients with severe bronchial asthma or chronic obstructive pulmonary disease. (15 marks)
 - 2.4. Differentiate between the pharmacokinetics of amantadine and rimantadine. (10 marks)
 - 2.5. Briefly explain the mechanism of action of amantadine against influenza A viruses. (25 marks)
 - 2.6. State one mechanism by which influenza A viruses develop resistance to amantadine. (10 marks)

3.

3.1. Infectious diseases caused by fungi are known as mycoses and are often chronic in nature.

3.1.1. Name two major types of mycoses and list three drugs used in the treatment of each type. (15 marks)

3.1.2. Briefly describe the mechanism of action of amphotericin B in the treatment of mycoses. (25 marks)

3.1.3. List three adverse drug reactions associated with amphotericin B therapy. (10 marks)

3.2. A 52-year-old woman with breast cancer is receiving chemotherapy that includes cyclophosphamide.

3.2.1. Briefly describe the mechanism of action of cyclophosphamide. (25 marks)

3.2.2. List four adverse effects associated with cyclophosphamide therapy. (10 marks)

3.2.3. Briefly explain the mechanisms by which resistance to cyclophosphamide may develop. (15 marks)

PART B

4.

4.1. List three goals of the management of methanol intoxication. (10 marks)

4.2. Briefly explain the toxicokinetics of methanol. (20 marks)

4.3. Outline the management of benzodiazepine poisoning. (20 marks)

4.4. Briefly explain the management of paracetamol poisoning, considering the time since ingestion, dose ingested, and blood paracetamol levels. (20 marks)

4.5. Explain the management of organochlorine poisoning. (30 marks)

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