



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

SECOND BPHARM PART I EXAMINATION – MARCH/APRIL 2021

PH 2134 PATHOLOGY AND PHARMACOLOGY I – SEQ

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. Nifedipine is a calcium channel blocker and belongs to dihydropyridines category.

1.1 List three drugs which can act as calcium channel blockers apart from nifedipine.

(15 marks)

1.2 Describe the mechanism of action of calcium channel blockers.

(30 marks)

1.3 Briefly describe pharmacological basis of using nifedipine in the treatment of hypertension.

(25 marks)

1.4 Write three indications of calcium channel blockers other than hypertension.

(15 marks)

1.5 State three common side effects of calcium channel blockers.

(15 marks)

02.

2.1 Bile acid sequestrants is a category of drugs used to treat dyslipidaemia.

2.1.1 Write one example for the above drug category.

(05 marks)

2.1.2 Briefly explain the mechanism of action of bile acid sequestrants.

(30 marks)

2.1.3 List three adverse effects of bile acid sequestrants.

(15 marks)

PART B

2.2

2.2.1 Name three risk factors for drug interactions.

(10 marks)

2.2.2 Differentiate direct-acting and indirect-acting adrenergic agonists giving one example for each.

(15 marks)

2.2.3. Write four therapeutic uses of beta blockers

(10 marks)

2.2.4. Write three adverse drug reactions associated with following drug groups.

(15 marks)

2.2.4.1 alpha blockers

2.2.4.2 beta blockers

03.

3.1 Briefly describe the physicochemical properties of a drug that affect the absorption through gastro intestinal tract.

(30 marks)

3.2 Explain the term 'Apparent volume of distribution'.

(10 marks)

- 3.3 Write the reaction types involved in drug metabolism under phase I and phase II. (15 marks)
- 3.4 Briefly differentiate the terms 'up regulation' and 'down regulation' of receptors. (20 marks)
- 3.5 Briefly explain the term 'Therapeutic range'. (15 marks)
- 3.6 Write two uses of Pharmacoeconomics. (10 marks)

PART C

04.

- 4.1 State the two types of cholinergic receptors found in nervous system. (10 marks)
- 4.2 Briefly explain mechanism of action of direct acting cholinergic agonists. (20 marks)
- 4.3 Write three indications and three adverse events for each of the following direct acting cholinergic agonists.
- 4.3.1. Bethanecol (12 marks)
- 4.3.2. Pilocarpine (12 marks)
- 4.4 Write two indications and three adverse events for each of the following indirect acting cholinergic agonists.
- 4.4.1. Physostigmine (15 marks)
- 4.4.2. Neostigmine (15 marks)
- 4.5 State four spasmolytic drugs. (16 marks)

05.

- 5.1.
- 5.1.1. Define inflammation. (10 marks)
- 5.1.2. State five outcomes of acute inflammation. (15 marks)
- 5.1.3. Outline the basis of edema in inflammation. (20 marks)
- 5.1.4. Briefly describe the morphologic patterns of acute inflammation. (20 marks)
- 5.2.
- 5.2.1. List the steps in wound healing. (15 marks)
- 5.2.2. Briefly describe the factors affecting repair of a wound. (20 marks)

PART D

06.

- 6.1
- 6.1.1 Define hypersensitivity. (10 marks)
- 6.1.2 Briefly describe the mechanisms involved in hypersensitivity type II. (30 marks)
- 6.2 Write a short note on immune tolerance. (30 marks)
- 6.3 Briefly describe the immunological basis of Acquired Immune Deficiency Syndrome. (30 marks)

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