



UNIVERSITY OF RUHUNA- FACULTY OF MEDICINE
THIRD EXAMINATION FOR MEDICAL DEGREES PART II – 27th of August 2009

PHARMACOLOGY PAPER I

Time 9.00 am – 11.00 am

Duration 2 hours

Answer all **FOUR** questions

Answer each part in a separate book

Part A

1

1.1. Indicate the pharmacological basis of using

1.1.1. misoprostol in peptic ulcer.

(25 marks)

1.1.2 neomycin in hepatic encephalopathy.

(25 marks)

1.2 A 65 years old male patient with a history of wheezing is admitted with fever and productive cough of 4 days duration. On examination he is dyspnoeic is febrile and centrally cyanosed with a respiratory rate of 30 / minute.

1.2.1 List **four drugs** that you would use in this patient soon after Admission.

(10 marks)

1.2.2 Indicate the precautions you would take during the administration of each drug.

(20 marks)

1.2.3. Briefly describe the pharmacological basis of using two of the drugs you mentioned 1.2.1

(20 marks)

Part B

2

A 70 year old man with hypertension and ischaemic heart disease presented with severe shortness of breath of 6 hours duration. He gave a history of nocturnal dyspnoea for the last one week. Examination showed elevated JVP, bilateral ankle oedema, central cyanosis and BP of 170/110 mmHg. Crepitations were heard in both lung fields up to the mid zones. Third heart sound was heard over the precordium.

2.1 List the **three drugs** that you would use in the acute management of this patient.

(15 marks)

2.2. Explain the pharmacological basis of using the drugs you mentioned in 2.1

(50 marks)

2.3 List three drugs which will be used for the long term management of this patient, giving reasons for your selection. (25 marks)

2.4 Indicate the side effects of the two drugs you have mentioned in 2.3. (10 marks)

Part C

3

3.1 State one clinical indication for each of the following drugs. (10 marks)

- a. Methotrexate
- b. Fludrocortisone
- c. Progestin
- d. Losartan potassium
- e. Ciprofloxacin

3.2 State the pharmacological basis of the five drugs listed in 3.1 for the indications you have mentioned. (30 marks)

3.3. Explain the following terms.

- 3.3.1 Adverse drug reactions (20 marks)
- 3.3.2 Phase I metabolism (20 marks)
- 3.3.3 Zero order/ saturation kinetics (20 marks)

Part D

4.

4.1 List the essential characteristics of a neurotransmitter. (15 marks)

4.2 Describe briefly the different mechanisms by which drugs can act by influencing neurotransmitters in the central nervous system. Illustrate your answer with examples. (50 marks)

4.3 Describe the mechanism of action of benzodiazepines. (25 marks)

4.4 List the clinical uses of benzodiazepines. (10 marks)