



UNIVERSITY OF RUHUNA - FACULTY OF MEDICINE
THIRD MBBS (PART II EXAMINATION)
PHARMACOLOGY - PAPER I
DECEMBER 2015

Answer all 05 questions

(9.00 a.m. – 11.30 a.m.) 2 ½ hours

Answer each part in a separate answer book

1.

1.1. Discuss the pharmacological reasons / indications for

1.1.1. warfarin in atrial fibrillation

(25 marks)

1.1.2. montelukast in bronchial asthma

(25 marks)

1.2. A 20 year-old female presented with four episodes of tonic-clonic seizures over one week. The seizure had lasted for 4-5 minutes and she was normal in between episodes. She gave a history of road traffic accident one year before, in which she got a severe head injury. General physical, neurological examination and MRI revealed no abnormality. There was no family history of epilepsy.

1.2.1. If antiepileptic drugs are to be started, what are the drug options available for this patient to control her seizures? (10 marks)

1.2.2. Select the most suitable drug for this patient. (10 marks)

1.2.3. Discuss the reasons for your selection. (30 marks)

- 2.
- 2.1.
- 2.1.1. Describe the pharmacological basis of using insulin in type 1 diabetes. (40 marks)
- 2.1.2. List five side effects of insulin therapy. (10 marks)
- 2.2. Describe the pharmacological basis of using
- 2.2.1. domperidone in vomiting due to gastroenteritis. (25 marks)
- 2.2.2. omeprazole in peptic ulcer disease. (25 marks)
- 3.
- 3.1. Compare and contrast dexamethasone and prednisolone. (25 marks)
- 3.2. Describe the pharmacological basis of using,
- 3.2.1. steroids in bronchial asthma (35 marks)
- 3.2.2. frusemide in acute pulmonary oedema due heart failure (40 marks)
- 4.
- 4.1. Write short notes on the followings.
- 4.1.1. First order kinetics (25 marks)
- 4.1.2. Dose response curves (35 marks)
- 4.2. Describe the pharmacological basis of using clozapine in schizophrenia. (40 marks)

5.

A 62 year-old male presenting with exertional chest pain is found to have blood pressure of 162/100 mmHg. His subsequent blood pressure measurements are also high. He has a past history of bronchial asthma and type 2 diabetes mellitus, both conditions are under control with treatment.

Following investigations are available.

Serum creatinine	-	1.8 mg/dL	(normal 0.8 - 1.2 mg/dl)
Serum sodium	-	144 meq/L	(normal 135 - 145 meq/L)
Serum potassium	-	5.9 meq/L	(normal 3.5 - 5.5 meq/L)
Urine full report	-	protein 1+, no RBC or pus cells	
Electrocardiogram	-	T inversion from chest leads V3 - V6	

- 5.1. Write a suitable antihypertensive medication to treat this patient. (10 marks)
- 5.2. Give two reasons for your choice of antihypertensive in 5.1. (20 marks)
- 5.3. Write two antihypertensive drugs you would avoid in this patient and state the reasons for it. (30 marks)
- 5.4. Few weeks later he was admitted with severe headache and was found to have blood pressure of 220/130 mmHg. His fundoscopic examination revealed bilateral papilloedema.
- 5.4.1. Discuss the management of this patient, giving more emphasis on the pharmacological agents used and their mode of administration. (30 marks)
- 5.4.2. Write two possible causes for the poorly controlled hypertension in this patient. (10 marks)