



Faculty of Medicine University of Ruhuna
Third Examination for Medical Degrees (Part II) October 2018

Pharmacology Paper I

Wednesday 31st October 2018

Answer all 05 questions

(9.00 a.m. - 11.30 a.m.) 2 ½ hours

Answer each part in a separate answer book

Part A

1. Describe the pharmacological basis of using the following drugs.
 - 1.1. Esomeprazole in peptic ulcer (25 marks)
 - 1.2. Morphine in acute left heart failure (25 marks)
 - 1.3. Methotrexate in rheumatoid arthritis (25 marks)
 - 1.4. Ipratropium bromide inhalation in bronchial asthma (25 marks)

Part B

2.
 - 2.1. Compare pharmacological effects of
 - 2.1.1. streptokinase and alteplase. (25 marks)
 - 2.1.2. penicillin G and benzathine penicillin. (25 marks)
 - 2.2. Describe the pharmacological basis of using,
 - 2.2.1. carbimazole in hyperthyroidism. (25 marks)
 - 2.2.2. co-careldopa in Parkinson's disease. (25 marks)

Part C

3.
 - 3.1. A 65 year-old diagnosed patient with ischemic heart disease was admitted to Emergency Treatment Unit with sudden onset of shortness of breath. He was treated for acute decompensated heart failure.
 - 3.1.1. Name two (02) drugs which are used to stabilize the patient. (10 marks)
 - 3.1.2. Describe the pharmacological basis of using a drug mentioned in 3.1.1 for the above condition. (25 marks)

- 3.1.3. Name two (02) drugs which should be administered to the patient after stabilization. (10 marks)
- 3.1.4. Describe the pharmacological basis of using a drug mentioned in 3.1.3 for the above condition. (25 marks)
- 3.2. List the advantages and disadvantages of novel oral anticoagulants (NOACs). (30 marks)

Part D

- 4.
- 4.1. Indicate the most appropriate hypoglycaemic agent you would like to prescribe for hyperglycaemia in each of the following patients. Explain the pharmacological reasons for your choice.
- 4.1.1. A 45 year-old obese patient who had fasting blood sugar of 270 mg/dL at the routine medical screening. (25 marks)
- 4.1.2. A 67 year-old female with fasting blood sugar of 260 mg/dL detected for the first time on the second post operative day following hysterectomy. (25 marks)
- 4.1.3. A 57 year-old male with 15 years of history of type 2 diabetes mellitus and already on glipizide 15 mg daily and metformin 1 g daily with HbA1c of 9%.
(Good control < 7%) (25 marks)
- 4.2. Describe the mode of action and clinical benefits of using dipeptidyl peptidase-4 (DPP-4) inhibitors in type 2 diabetes mellitus. (25 marks)

Part E

- 5.
- 5.1. List five (05) antiepileptic drugs. (20 marks)
- 5.2. Describe the mechanism of action of one of the antiepileptic drugs mentioned in 5.1. (30 marks)
- 5.3. Describe the management of status epilepticus. (50 marks)