



UNIVERSITY OF RUHUNA - FACULTY OF MEDICINE
THIRD MBBS (PART II EXAMINATION)
PHARMACOLOGY - PAPER I
DECEMBER - 2016

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 A 35 year-old patient with type 2 diabetes mellitus found to have blood pressure of 150/100 mmHg at two occasions in a diabetes clinic. She is a labourer with two children.

1.1.1 Name a suitable antihypertensive drug for this patient. (05 marks)

1.1.2 Justify the above selection including the pharmacological basis. (40 marks)

1.2 Four months after the commencement of the antihypertensive drug, she became pregnant.

1.2.1 List three (03) antihypertensive drugs which could be prescribed for this patient during pregnancy. (15 marks)

1.2.2 Select the most suitable antihypertensive drug for this patient from the above list mentioned in 1.2.1. (10 marks)

1.2.3 Describe the pharmacodynamics of the antihypertensive drug stated in 1.2.2. (30 marks)

2.

- 2.1. A 28 year-old female admitted with acute severe asthma. In the acute management, the loading dose of aminophylline was not given since she was on oral theophylline.

Justify the above management. (25 marks)

- 2.2. Describe briefly the pharmacological basis of using prednisolone in the management of bronchial asthma. (25 marks)

- 2.3. A 60 year-old manual labourer who works in a cement factory was prescribed an inhaler device for the long term management of bronchial asthma.

Compare and contrast metered dose inhaler vs dry powder inhaler with regard to their pharmacokinetic effects and socio-economic aspect. (50 marks)

3. Compare pharmacological and therapeutic effects of

- 3.1. metformin and gliclazide. (25 marks)
3.2. monophasic pills and triphasic pills. (25 marks)
3.3. carbimazole and propylthiouracil. (25 marks)
3.4. ergometrine and oxytocin. (25 marks)

4.

- 4.1. List types of insulin according to the onset of action with an example to each. (20 marks)

- 4.2. Describe how you would advise a patient who is prescribed insulin for the first time. (30 marks)

4.3.

- 4.3.1. List three (03) drugs which act by inhibiting voltage gated sodium channels. (10 marks)

- 4.3.2. List an indication of each drug mentioned in 4.3.1. (10 marks)

- 4.3.3. Describe the mode of action of one drug mentioned in 4.3.1. (30 marks)

5. A 64 year-old male was admitted with severe shortness of breath for a day. He has history of ischemic heart disease and atrial fibrillation. Examination revealed blood pressure of 170/110 mmHg with pulse rate of 144 beats/min. Chest radiograph showed evidence of pulmonary oedema and ECG showed atrial fibrillation.

- 5.1. Name two (02) drugs that can be used to control tachycardia in this patient and mention the reasons for your selection. (20 marks)
- 5.2. Mention the route of administration, precautions and the adverse effects of one of the drugs mentioned in 5.1. (15 marks)
- 5.3. Describe the pharmacological management of this patient during first 24 hours of hospital admission. (30 marks)
- 5.4. List three (03) drugs that can be used in the long term management of this patient. (15 marks)
- 5.5. State the steps in the long term management of atrial fibrillation in this patient. (20 marks)