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UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

SECOND BPHARM PART I EXAMINATION – JUNE 2016

PH 2134 – PATHOLOGY AND PHARMACOLOGY I (SEQ)

TIME: THREE HOURS

INSTRUCTIONS

- Answer **all** questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

1.

1.1. Describe the pharmacological basis of using atropine in organophosphate poisoning

(50 marks)

1.2. Describe the uses of cholinergic and anti-cholinergic drugs with examples

(50 marks)

2.

2.1. List the drugs used in peri-operative period ***(30 marks)***

2.2. Describe the pharmacological basis of using adrenaline with lignocaine in local anesthesia

(35 marks)

2.3. Describe the pharmacological basis of using thiopental sodium as an induction agent in anasthesis, for a patient with past history of seizures ***(35 marks)***

3.

3.1. Differentiate the pharmacodynamics versus pharmacokinetics. ***(05 marks)***

3.2. List five major components under the pharmacokinetics. ***(10 marks)***

3.3. Explain the receptor and non-receptor mechanisms of action of drugs.

(30 marks)

3.4. Explain the dose response relationship with appropriate diagrams and examples.

(50 marks)

3.5. Classify the passage of drugs through plasma membrane according to the type of bio-transportation of drugs. ***(05 marks)***

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4. A 58 year-old male with angina is treated with diltiazem and isosorbide mono nitrate.

4.1. What are the treatment goals for angina? ***(20 marks)***

4.2. Classify anti-anginal drugs with examples. ***(20 marks)***

4.3. Illustrate the mechanism of action of nitrates ***(20 marks)***

4.4. What is nitrate tolerance and how to overcome it? ***(10 marks)***

4.5. List the adverse effects of diltiazem? ***(20 marks)***

4.6. Explain the consequences of co-administration of verapamil and atenolol for angina ***(10 marks)***

5. A 60 year-old man has hypertension, diabetes and hyperlipidemia and was started with an HMG-CoA reductase inhibitor and a fibrate.

5.1. Give two examples for each of the drug class mentioned above. ***(20 marks)***

5.2. Explain the mechanism of action of

5.2.1 HMG- CoA reductase inhibitors ***(10 marks)***

5.2.2 fibrates ***(10 marks)***

5.3. State the adverse effects of HMG- CoA reductase inhibitors ***(20 marks)***

5.4. Name an ideal agent for a hyperlipidemic patient accompanied with gout. ***(10 marks)***

5.5. Discuss the factors you would explain to the patient before the commencement of the therapy for hyperlipidemia ***(30 marks)***

6.

6.1. What is acute inflammation? ***(10 marks)***

6.2. What are the cardinal features of acute inflammation? ***(10 marks)***

6.3. Explain the pathological basis of cardinal features of acute inflammation? ***(25 marks)***

6.4. What are the characteristic features of chronic inflammation? ***(15 marks)***

6.5. What is a granuloma? ***(10 marks)***

6.6. List five (5) causes of granuloma inflammation. ***(10 marks)***

6.7. List five (5) carcinogens and the tumor associated with the carcinogen. ***(20 marks)***

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