

Index number:



UNIVERSITY OF JAFFNA, SRI LANKA
SECOND EXAMINATION FOR MEDICAL DEGREES PART 2-January 2025
Academic year 2019/ 2020
Clinical Pharmacology and Therapeutics-Paper II

Date: 22.01.2025

9.00 am to 12.00 pm (03 hours)

Answer all SIX questions

Write the answers in the given space below each question.

1.

1.1. Define the term systemic bioavailability.

(10 marks)

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1.2. Explain six (06) important factors that affect systemic bioavailability of medicines when administered orally.

(30 marks)

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1.3. Write two (02) examples of medicines

1.3.1. having very poor bioavailability when given orally. (05 marks)

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1.3.2. having very good bioavailability when given orally. (05 marks)

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1.4. Discuss five (05) examples where information on distribution of medicines in the body will be useful in patient management. (30 marks)

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Date: 22.01.2025

Answer all SIX questions

[illegible]

(20 marks)

[illegible]

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2.

2.1. Classify the cholinomimetics with examples.

(20 marks)

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2.2. Describe the mechanism of action of each group mentioned in 2.1.

(20 marks)

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2.3. Discuss the pharmacological basis of using following medicines in the given conditions

2.3.1. Ipratropium bromide in chronic obstructive pulmonary disease. (15 marks)

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2.3.2. Pilocarpine in glaucoma. (15 marks)

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2.3.3. Tropicamide prior to ophthalmoscopic examination. (15 marks)

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2.3.4. Neostigmine in myasthenia gravis. (15 marks)

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3.

- 3.1. Mention the first choice of Disease Modifying Anti Rheumatoid Drug (DMARD) in the treatment of rheumatoid arthritis. (05 marks)

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- 3.2. Describe the mechanism of the medicine mentioned in 3.1 that is responsible for anti-inflammatory effect in rheumatoid arthritis. (15 marks)

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[illegible][illegible]

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3.5. Discuss the role of the following in the treatment of Rheumatoid Arthritis.

3.5.1. Non steroidal anti inflammatory drugs (15 marks)

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3.5.2. Biological agents (15 marks)

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3.5.3. Corticosteroids

(20 marks)

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Answer all SIX questions

4.1. Explain how the mechanism of action of antiepileptic medications influences the spectrum of antiepileptic activity giving examples. (25 marks)

[illegible]

This image shows a full page of a handwriting practice worksheet. It consists of multiple sets of three horizontal dashed lines spaced evenly down the page, providing a guide for letter height and placement. The background is plain white, and there are no other markings or text present.

Date: 22.01.2025

Answer all SIX questions

[illegible]

[The page contains horizontal scan artifacts.]

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4.4. Give two (02) examples for the following;

4.4.1. Antiepileptic agents that are given only by oral route. (05 marks)

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4.4.2. Antiepileptic agents that should be avoided in absence seizure. (05 marks)

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4.4.3. Antiepileptic agents that can be used in the migraine prophylaxis. (05 marks)

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5. A 30-year-old women is referred to the medical clinic by a medical office of Out Patient Department with the history of high random blood sugar on one occasion. She has been investigated at the medical clinic.

5.1. Mention the different criteria for diagnosing diabetes mellitus. (15 marks)

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- 5.2. If she is diagnosed to have type 2 diabetes mellitus, name five (05) groups of antidiabetic medications that can be considered for this patient. Give one (01) example for each group. (25 marks)

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5.3. Mention the advantages of each of the medicines mentioned in 5.2. (20 marks)

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9.00 am to 12.00 pm (03 hours)

[illegible]

5.4.1. Her HbA1c is 6.0% with no other comorbidities except overweight.(20 marks)

[illegible]

5.4.2. She presents at 24 weeks of gestation. Her blood sugar levels at one-hour and two-hour post 75mg oral glucose load are 330mg/dl and 252mg/dl respectively.
(20 marks)

9.00 am to 12.00 pm (03 hours)

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6. A 54-year-old patient presents with central, tightening chest pain and is diagnosed with Non-ST-Elevation Myocardial Infarction (NSTEMI). Appropriate treatment for NSTEMI is initiated; however, the patient's blood pressure persistently elevated at 200/110 mmHg. 6.1. From a hypertensive perspective, mention the diagnosis? Give reasons (10 marks)

[illegible]

6.2. Describe the management of high blood pressure in this patient at the emergency

department?

(20 marks)

[illegible]

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6.3. Name two (02) other alternative antihypertensive agents that could be used at the emergency department. (10 marks)

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6.4. Name the antihypertensive agent you would start for long-term blood pressure control in this patient? Mention the rationale for choosing this antihypertensive agent. (20 marks)

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6.5. Mention two (02) important adverse effects that can occur with the antihypertensive agent mentioned in 6.4? (10 marks)

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6.6. Two weeks after starting the antihypertensive agent mentioned in 6.4, the patient presents with worsening of renal function tests with a doubled serum creatinine level compared to the admission value.

6.6.1. Mention the cause of this deterioration? Briefly explain the mechanism responsible for this deterioration. (20 marks)

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6.6.2. Name the alternative class of antihypertensive agent for the long term management of hypertension for this patient with reasons. (10 marks)

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