

MANIPAL ACADEMY OF HIGHER EDUCATION
SECOND MBBS DEGREE EXAMINATION – APRIL/MAY 2023
SUBJECT: PHARMACOLOGY – PAPER I (ESSAY)

(OLD REGULATION - 2018-19 & PRIOR BATCH)

Wednesday, April 26, 2023

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

- 1A. Classify atropine substitutes with suitable examples. Explain the actions of atropine on the eye and cardiovascular system.
- 1B. Mention four uses of atropine or its substitutes. (4+4+2 = 10 marks)
2. 60-year-old man, has come to the casualty with severe retrosternal pain radiating to the left arm and jaw. The pain started while he was driving. His blood pressure is 130/85 mm of Hg and his pulse rate is 78/min. ECG showed ischemic changes during the attack which was suggestive of acute angina.
- 2A. Mention the drug and its route of administration to treat an acute attack of angina. Explain its mechanism of action, other uses, and adverse effects.
- 2B. Mention any three calcium channel blockers and their uses. (1+2+2+2+3 = 10 marks)
3. **Answer the following:**
- 3A. Explain four factors modifying the action of a drug.
- 3B. Explain enzyme induction and inhibition with two examples each.
- 3C. Write briefly about drug nomenclature.
- 3D. Explain the terms teratogenicity and idiosyncrasy with examples.
- 3E. Explain four uses of adrenaline.
- 3F. Name two non-depolarizing skeletal muscle relaxants. Mention their uses and adverse effects.
- 3G. Mention four ACE inhibitors. Explain two uses.
- 3H. Explain the mechanism of action and adverse effects of hydrochlorothiazide.
- 3I. Mention two groups of drugs with examples used by inhalation route for the treatment of bronchial asthma. Explain their mechanism of action.
- 3J. Explain the mechanism of action, uses, and adverse effects of metoclopramide.
- 3K. Mention two groups of drugs with examples to decrease gastric acid secretion. Explain the mechanism of action of anyone.
- 3L. Name two parenteral iron preparations. Mention the indications for parenteral iron therapy.
- 3M. Explain the mechanism of action and mention the uses of heparin.
- 3N. Name four second-generation antihistamines. Mention two differences between first and second-generation antihistamines.
- 3O. Explain the mechanism of action, use, and adverse effects of sumatriptan. (4 marks × 15 = 60 marks)



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SUBJECT: PHARMACOLOGY – PAPER II (ESSAY)
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Friday, April 28, 2023

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

✍ **Long essay**

1. A 70-year-old male presented to the outpatient clinic with complaints of intermittent resting tremor of the left hand since 1 year, which progressed gradually to the contralateral hand. The condition was diagnosed as Parkinson's disease and the patient was started on a fixed dose combination of levodopa and carbidopa.

1A. Explain the rationale of combining levodopa and carbidopa.

1B. Explain two early and two delayed side effects of levodopa.

1C. Name two drugs that can be used as adjuvants to this combination in advanced Parkinsonism.

1D. Explain the treatment of drug induced parkinsonism with rationale.

(3+4+1+2 = 10 marks)

2A. Outline the treatment regimen for a case of uncomplicated Vivax malaria and explain the mechanism of action of the drugs used.

2B. Add a note on chemoprophylaxis of malaria.

(3+4+3 = 10 marks)

3. **Answer the following:**

3A. Mention the drugs used as first line therapy in tuberculosis. Explain the rationale of combining these drugs for the treatment of tuberculosis.

3B. Classify semi-synthetic penicillins with suitable examples.

3C. What is cotrimoxazole? Explain its uses and adverse effects.

3D. A patient on metronidazole consumed alcohol, following which he developed flushing and hypotension. Explain this interaction. Add a note on the mechanism of action of metronidazole.

3E. Explain four factors that play a role in choosing an antimicrobial agent.

3F. Explain hypothalamo-pituitary-adrenal (HPA) axis suppression with respect to long term use of corticosteroids. Mention four other adverse effects associated with long term use of these drugs.

3G. Outline the management of thyrotoxic crisis.

- 3H. Explain three mechanisms by which combined oral contraceptive pills (OCPs) act. Mention two adverse effects of OCPs.
- 3I. Classify oral antidiabetic agents with suitable examples.
- 3J. Explain how plasma calcium levels are regulated by hormones. Mention two uses of calcium.
- 3K. Mention three drugs with rationale used as preanaesthetic medications. What is conscious sedation?
- 3L. Explain the mechanism of action of benzodiazepines. How are they different from barbiturates?
- 3M. Explain the mechanism of action of Aspirin. Mention two uses and two adverse effects.
- 3N. Mention two drugs each that are used in acute and chronic gout. Explain the mechanism of action of any one.
- 3O. Outline the management of status epilepticus.

(4 marks × 15 = 60 marks)

