

Question Paper

Exam Date & Time: 10-Feb-2023 (10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND MBBS DEGREE EXAMINATION – FEBRUARY 2023
SUBJECT: PHARMACOLOGY - PAPER I
(CBME BATCH)

Marks: 80

Duration: 160 mins.

Answer all the questions.

Illustrate your answers with neatly drawn and labeled diagram wherever necessary

- 1) Explain non-synthetic and synthetic reactions of biotransformation of drugs, with suitable examples. Add a note on microsomal enzyme induction and its clinical implications. (6+4 = 10)

- 2) A 27-year-old busy doctor has severe acid-peptic disease
 - 2A) Name two groups of drugs with two examples each that can be used to reduce gastric acid secretion in this patient. (3)
 - 2B) On investigation, the patient is found to be positive for H. pylori infection. Explain with rationale one regimen that can be used in this patient. (5)
 - 2C) Explain the disadvantages of prostaglandin analogues in this condition. (2)

- 3) **Answer the following:**
 - 3A) Explain the mechanism of action of naproxen. Give reasons for avoiding its use in full term pregnant women. (4)
 - 3B) A 51-year-old patient presented with gradual onset double vision, drooping eyelids and weakness of limbs which is more prominent after exercise. A provisional diagnosis of myasthenia gravis is made. Which pharmacological test can be done to confirm the diagnosis? Explain. Explain the treatment of this condition. (4)
 - 3C) The anaesthetist injected succinylcholine I.V. for endotracheal intubation before an elective abdominal surgery. The patient developed prolonged apnoea. What is the reason for this prolonged apnoea? What is the line of management for recovery? (4)
 - 3D) Explain the mechanism of action of sumatriptan in the treatment of migraine. Name two drugs used for prophylaxis of a migraine with rationale. (4)
 - 3E) With the help of examples explain the two types of drug synergism. (4)
 - 3F) Name different classes of drugs that inhibit renin-angiotensin-aldosterone system. Mention one example for each class. (4)
 - 3G) Explain the mechanism and types of allergic reaction to drugs. (4)

- 3H) Mention the cardiac and extracardiac manifestations of digoxin toxicity. Add a note on its treatment. (4)
- 3I) With the help of one example each explain the rationale of using anticholinergics in preanaesthetic medication and as mydriatics. (4)
- 3J) Explain the mechanism of action and uses of enoxaparin. (4)
- 3K) A hypertensive patient developed myocardial infarction. He was successfully treated in a hospital and is now being discharged. Name two antihypertensives that would be preferred in this patient. Justify. (4)
- 3L) A patient undergoing brain surgery needs medication to prevent acute rise in intracranial pressure. Name the drug with route of administration that may be administered. Explain the mechanism of action of this drug and mention two contraindications. (4)
- 3M) Name two parenteral iron preparations. Mention three indications for parenteral iron therapy. (4)
- 3N) A 75-year-old known asthmatic presents to the emergency room with acute severe asthma. Outline the management of this patient. (4)
- 3O) Explain the mechanism of action, use and adverse effects of atorvastatin. (4)

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Question Paper

Exam Date & Time: 13-Feb-2023 (10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND MBBS DEGREE EXAMINATION – FEBRUARY 2023

SUBJECT: PHARMACOLOGY - PAPER II

(CBME BATCH)

Marks: 80

Duration: 160 mins.

Answer all the questions.

Illustrate your answers with neatly drawn and labeled diagram wherever necessary

- 1) A 68-year-old diabetic woman has been on metformin for the past 10 years. Her blood glucose level is now not wellcontrolled.
 - 1A) Which drug may be added to improve the glycaemic control? Justify. (2)
 - 1B) Explain the mechanism of action of metformin. (2)
 - 1C) Classify insulins. Mention two insulin combinations used in diabetes. Explain the rationale for the combination. (3+1+2)

- 2) A 51-year-old male labourer reports to the hospital with cough and expectoration, weakness and fatigue for the last two weeks. He also has low grade fever for the past one week. His sputum is positive for acid fast bacilli. Drug-sensitivity tests showed sensitivity to all first-line drugs.
 - 2A) Write the treatment regimen for this patient. (4)
 - 2B) Explain the mechanism of action of each of the drugs mentioned. (4)
 - 2C) Mention the characteristic adverse effect(s) of the mentioned drugs. (2)

- 3) **Answer the following:**
 - 3A) Name two benzodiazepine and two non-benzodiazepine hypnotics. Write their differences. (4)
 - 3B) Explain the adverse effects of combined oral contraceptives. (4)
 - 3C) Name two amide-linked local anaesthetics. Mention two advantages of these drugs over esterlinked anaesthetics. Explain the mechanism of action of local anaesthetics. (4)
 - 3D) Write briefly on post exposure prophylaxis and perinatal HIV prophylaxis. (4)
 - 3E) Explain the mechanisms of action and uses of valproic acid. (4)
 - 3F) A 60-year-old man presents with fever and chills. On investigation he is diagnosed to have falciparum malaria. Explain the treatment for this patient with dose and duration of therapy. Mention the mechanism of action of any one drug used. (4)

- 3G) A 47-year-old woman with systemic lupus erythematosus is on prednisolone 40 mg daily for the past 14 months. Explain the adverse effects that can occur in this patient. (4)
- 3H) A 72-year-old woman diagnosed with Parkinson's disease is on a combination of levodopa and carbidopa for the past 6 years. Explain the mechanism of action of this combination. What adverse effects would you expect with levodopa? (4)
- 3I) Explain two objectives of using antimicrobial combination with a suitable example for each objective. (4)
- 3J) Explain the complications of general anaesthesia. (4)
- 3K) Explain the advantages of liposomal amphotericin B over the conventional preparation. (4)
- 3L) Explain the advantages of risperidone over haloperidol. (4)
- 3M) Name two chelating agents. Explain the mechanism of action and uses of each. (4)
- 3N) Explain the mechanism of action and adverse effects of aminoglycosides. (4)
- 3O) Explain the treatment of filariasis. Add a note on mass programs to suppress disease transmission. (4)

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