

2019 Scheme

Q.P. Code: 211001

Reg. no.:

Second Professional MBBS Degree Regular/Supplementary Examinations August 2025

Pharmacology - Paper I

(General Pharmacology, ANS, CNS, CVS, Blood, Diuretics, Autacoids, Respiratory System)

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers
- Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

1. Multiple Choice Questions

(20x1=20)

The responses for MCQ questions (Q.No. i to Q.No. xx) shall be written in the space provided for answering MCQ questions at page No. 51 of the answer book (the inner portion of the back cover page (PART III)). Responses for MCQs marked in any other part/page of the answer book will not be valued

Question Numbers i – v are Single Response Type

- Drug which is not given orally because of having a high first pass metabolism
a) Hydrocortisone b) Theophylline c) Phenobarbitone d) Pindolol
- Beta blocker with additional alpha blocking activity
a) Pindolol b) Carvedilol c) Bisoprolol d) Timolol
- First CGRP receptor antagonist approved by US-FDA for treatment of Acute Migraine
a) Atogepant b) Ubrogepant c) Zavegepant d) Rimegepant
- Pure opioid antagonist used for the treatment of Morphine poisoning
a) Nalbuphine b) Nalorphine c) Naloxone d) Buprenorphine
- Potassium channel opener used as an Antianginal agent
a) Nicorandil b) Amlodipine c) Ranolazine d) Ivabradine

Question Numbers vi – x are Multiple Response Type. Read the statements and mark the answers appropriately.

- Which of the following are used as Mucolytics
1) Acebrophylline 2) Theophylline 3) Dextromethorphan 4) Acetyl cysteine
a) 1 & 2 are correct b) 2 & 3 are correct c) 3 & 4 are correct d) 1 & 4 are correct
- Cognition enhancers used in Alzheimer's Disease
1) Primidone 2) Piracetam 3) Memantine 4) Rufinamide
a) 1 & 2 are correct b) 2 & 3 are correct c) 3 & 4 are correct d) 1 & 4 are correct
- Direct Thrombin Inhibitor given parenterally
1) Rivaroxaban 2) Bivalirudin 3) Argatroban 4) Edoxaban
a) 1 & 2 are correct b) 2 & 3 are correct c) 3 & 4 are correct d) 1 & 4 are correct
- Acetazolamide is used in the following conditions
1) Hypertension 2) Heart failure 3) Absence Epilepsy 4) Glaucoma
a) 1 & 2 are correct b) 2 & 3 are correct c) 3 & 4 are correct d) 1 & 4 are correct
- Following drugs are highly bound to plasma protein albumin
1) Phenytoin 2) Warfarin 3) Prazosin 4) Bupivacaine
a) 1 & 2 are correct b) 2 & 3 are correct c) 3 & 4 are correct d) 1 & 4 are correct

Question Numbers xi – xv are based on case scenarios. Read the statements and mark the answers accordingly.

A 19-year old man is brought to the physician's office by his very concerned mother for his "bizarre" behaviour. He has accused several fellow students and professors of spying on him. He has stopped bathing and will only change his clothes once a week. In your office you find him with acute psychosis likely secondary to Schizophrenia, admit him to the psychiatric unit of the hospital and start him on Haloperidol

- Haloperidol is potent antagonist of receptor
a) Alpha 2 b) D2 c) Beta 1 d) D1
- Which of the following is an atypical antipsychotic
a) Clozapine b) Chlorpromazine c) Thioridazine d) Haloperidol
- Compared to the low potency phenothiazine antipsychotic agents, haloperidol is more likely to cause which of the following adverse effect
a) Akathisia b) Orthostatic hypotension c) Sedation d) Urinary retention

(PTO)

- xiv. Exacerbation of new onset of Diabetes is more frequent with
 - a) Haloperidol
 - b) Chlorpromazine
 - c) Quetiapine
 - d) Aripiprazole
- xv. Following antipsychotic drug has weak D₂ blocking action, but additional 5-HT₂ blocking activity and benefits both positive and negative symptoms of Schizophrenia
 - a) Loxapine
 - b) Clozapine
 - c) Pimozide
 - d) Penfluridol

Question numbers xvi – xx consists of statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate options given below.

- a) Both A & R are true and R is the correct explanation
 - b) Both A & R are true and R is not the correct explanation
 - c) A is true but R is false
 - d) A is false but R is true
- xvi. **Assertion:** Gastric toxicity is the major consideration in the use of NSAIDs
Reason: NSAIDs cause inhibition of COX-1 mediated synthesis of gastroprotective Prostaglandins
 - xvii. **Assertion:** Entacapone is useful in the treatment drug induced Parkinsonism
Reason: By inhibiting the metabolism of levodopa by COMT, entacapone allows a larger fraction of Levodopa to enter the brain
 - xviii. **Assertion:** Genetically determined reaction Malignant Hyperthermia is produced by Halothane
Reason: Susceptible subjects have an abnormal Ryanodine receptor 1 Calcium channel at the sarcoplasmic reticulum which is triggered by Halothane, cause massive release of calcium leading to muscle contraction and heat production
 - xix. **Assertion:** Older antihistaminics produce dryness of mouth, urinary hesitancy and blurring of vision
Reason: Older antihistaminics have anticholinesterase property
 - xx. **Assertion:** Vitamin K is the specific antidote for Heparin induced bleeding
Reason: Vitamin K helps in the resynthesis and release of Vitamin K dependent clotting factors

Long Essays: **(2x10=20)**

2. Define Biotransformation. What are the various phases of Biotransformation. Add a detailed note on factors affecting drug action (2+3+5)
3. A 60-year-old man came to casualty with complaints of heaviness in chest. He gives a history of similar discomfort while climbing stairs, which relieved on taking rest. On examination his BP was 152/86 mm of Hg and pulse rate was 88/minute. He gives history of sudden cardiac deaths in his family
 - a) How will you treat this patient, a case of Angina pectoris
 - b) Classify Antianginal drugs
 - c) Explain in detail the mechanism of action and adverse effects of Nitrates
 - d) Which all drugs can be given as prophylaxis (2+3+3+2)

Short Essays: **(6x6=36)**

4. What are the clinical manifestations of Methanol poisoning. How will you manage the patient (2+4)
5. Classify drugs used in treatment of congestive cardiac failure. Discuss the role of diuretics in heart failure (4+2)
6. Discuss the mechanism of action of local anaesthetics. Discuss in detail about the various complications of Spinal anaesthesia (2+4)
7. Discuss the role of Inhalational Steroids in the management of Bronchial Asthma. How will you manage a patient with Status Asthmaticus (3+3)
8. What is Chronic Gout. What is the role of Uric acid synthesis inhibitors in the management of Chronic Gout (1+5)
9. Enumerate the Alpha 1 selective adrenergic blockers. Discuss their indications for use and adverse effects. (2+2+2)

Short Answers: **(6x4=24)**

10. Define Bioavailability. What are the various factors affecting Bioavailability
11. Write the pharmacological actions, uses, adverse effects and contra indications of Morphine
12. Discuss the Pharmacotherapy of Myasthenia Gravis
13. Describe the various drugs used in treatment and prophylaxis of Migraine
14. Enumerate the drugs used as Pre anaesthetic medication with the rationale for use of each
15. Discuss the types of communication and its importance
