THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0322] **MARCH 2022** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020 Batch onwards)

SECOND YEAR

PAPER I – PHARMACOLOGY – I

Q.P. Code: 526061

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. 60 years old female, is a known HT and DM for the past 20 years has been admitted with the C/o progressive swelling in the face, abdomen and legs for the past 3 months

   a) What is your diagnosis.
   b) Classify diuretics.
   c) Describe the mechanism of action, uses and adverse effects of high ceiling diuretics.
   d) Justify the rationality in combining high ceiling diuretics with ACE inhibitors.

2. A 65 years old male on antipsychotic medications came with the C/o difficulty in walking, resting tremors and difficulty in swallowing

   a) What is the diagnosis.
   b) How will you treat this patient.
   c) Describe the mechanism of action, importance of combination therapy and adverse effects of Levodopa.

II. Write Short notes on: **(10 x 5 = 50)**

1. Mechanism of action and clinical uses of statins.
2. Pharmacovigilance .
3. Therapeutic effects of atypical antipsychotics.
4. Brief phase II biotransformation reactions with suitable examples.
5. Therapeutic uses of Adrenergic drugs.
6. Drugs used in prophylaxis of migraine.
7. Role of Leukotriene antagonists used in bronchial asthma.
8. Brief the drugs used in hypertensive emergencies.
9. Heparin versus warfarin.
10. Complications of Spinal Anaesthesia.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0822] AUGUST 2022 Sub. Code: 6061

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND YEAR – SUPPLEMENTARY (CBME)

PAPER I – PHARMACOLOGY – I

Q.P. Code: 526061

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 35-year-old woman was taking combined oral contraceptive pills. She was diagnosed as a case of Pulmonary tuberculosis and put on isoniazid, rifampicin, pyrazinamide and ethambutol combination therapy daily for 2 months followed by isoniazid and rifampicin thrice weekly for 4 months. In the 3rd month of treatment, she failed to have withdrawal bleeding during the gap period of contraceptive cycle. One week later her urinary pregnancy test was found to be positive.

   A. What is the reason for contraceptive failure?

   b. Explain Phase I biotransformation reaction with suitable examples.

   c. Name 4 enzyme inducers and explain the clinical relevance of Microsomal Enzyme Induction.

   d. Explain microsomal enzyme inhibition with suitable examples.

2. A 8-year-old boy was sent for neurologic evaluation because of episodes of apparent inattention. His mother gives a history of episodes of starring look which lasts for few seconds, and he immediately resumes his previous activity. He was diagnosed to have absence seizures.

   a. Describe the mechanism of action of the drug used in absence seizures?

   b. Mention the adverse effects, uses and drug interactions of the drug used in absence seizures

   c. Treatment of status epilepticus

II. Write Short notes on: **(10 x 5 = 50)**

1. Teratogenicity.
2. Drugs used in open angle Glaucoma.
3. Fibrinolytic drugs.
4. Mechanism of action and adverse effects of ACE inhibitors.
5. Preanesthetic medication.
6. Role of sympathomimetics used in Bronchial Asthma.
7. Antianxiety agents.
8. Mechanism of action and adverse effects of Succinylcholine.
9. Disease modifying anti-Rheumatic drugs (DMARDS).
10. Uses of Prostaglandins.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0223] **FEBRUARY 2023** **Sub. Code : 6061**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND YEAR – (CBME)

PAPER I – PHARMACOLOGY – I

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A foot ball player sustained injury, developed swelling and pain in the right ankle, he could not walk he was applied with analgesic spray, he felt better.
   a) Brief the action of analgesic spray.
   b) Classify NSAIDS.
   c) Describe the mechanism of action, uses, adverse effects and contraindications of aspirin.

2. While you had gone out for shopping in the mall you saw an elderly person shouting for help holding the chest. Being a medical student.
   a) What could be your diagnosis and how will you do first aid for this patient?
   b) Classify antianginal drugs.
   c) Describe the mechanism of action, uses and adverse effects of Nitrates.

II. Write Short notes on: **(10 x 5 = 50)**

1. Define pharmacogenetics and brief with suitable examples.
2. Management of Organophosphorus compound poisoning.
3. Write the mechanism of action of Local anaesthetics. What is the Rationale of giving adrenaline with local anaesthetics?
4. Treatment of status asthmaticus.
5. Mention the uses and contraindications of Morphine.
6. Therapeutic uses of fibrinolytics and contraindications to their use.
7. Advantages and contra indications for parenteral iron therapy.
8. Treatment of acute gout.
9. Clinical importance of microsomal enzyme induction.
10. Mechanism of action and adverse effects of high ceiling diuretics.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0723] **JULY 2023** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020 Batch onwards)

SECOND YEAR – (CBME)

PAPER I – PHARMACOLOGY – I

Q.P. Code: 526061

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 25 year old lady is brought with complains of recurrent episodes of fits lasting for 2-3 minutes. She experiences aura before each episode. Description of fit by the husband corresponds to generalized tonic clonic seizure.
   a) Enumerate drugs used in Epilepsy.
   b) Explain the mechanism of action, therapeutic uses, adverse effects and Drug interactions of Phenytoin.
   c) Write briefly the management of febrile convulsions.

2. A 60 year old male came with severe chest pain, sweating and his ECG showed features of myocardial infarction and investigations showed raised LDL.
   a) Discuss the drug therapy in myocardial infarction.
   b) Classify Hypolipidaemic agents.
   c) Discuss in detail the mechanism of action, uses and adverse effects of Statins.

II. Write Short notes on: **(10 x 5 = 50)**

1. Explain drug addiction with examples.
2. A 70 years old male presented with complaints of weak stream of urine, sense of incomplete voiding and increased urinary frequency. On physical examination and ultrasound, he was diagnosed as having benign prostatic hypertrophy.
   a) What are the preferred drugs for this patient?
   b) What is the rational in using them?
3. Classify drugs used in Gout. Explain the mechanism of action and adverse effects of Allopurinol.
4. Discuss First pass metabolism and its clinical significance with examples.
5. Write the mechanism of action, uses and adverse effects of Baclofen.
6. Discuss the advantages of Fentanyl over Morphine and mention its uses.
7. List out the antiplatelet agents and elaborate on their uses with rationale.
8. Management of Hypertension in pregnancy.
9. Explain the mechanism of action, adverse effects and role of Methylxanthines in Bronchial asthma.
10. Differentiate the mechanism of action of Spironolactone and Amiloride and what are their therapeutic uses.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0224] **FEBRUARY 2024** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL YEAR – (CBME)

PAPER I – PHARMACOLOGY

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A large scale Multi centered randomized double blind trials in 3000 patients was carried out to further establish the safety and efficacy of Drug X.
   a) What is the phase of this clinical trial?
   b) What is double blind trial?
   c) Write briefly about different phases of clinical trials.
   d) What is a pre clinical trial?

2. A 70 year old woman came to OPD with complaints of pain in her right thigh muscle. Duplex Ultrasonography indicates the presence of deep vein thrombosis in the affected limb. The decision was made to treat this woman with Enoxaparin.
   a) Explain the mechanism and uses of Enoxaparin.
   b) Reason for preferring Enoxaparin over Heparin.
   c) Write in detail about Mechanism of action, uses and adverse effects of Heparin.

II. Write Short notes on: **(10 x 5 = 50)**

1. Define Bioavailability and write briefly on factors affecting oral bioavailability.
2. What determines decision making capacity and competency?
3. Migraine prophylaxis.
4. Syndopa :
   a) What is the above FDC?
   b) Benefits of this Combination.
   c) ON - OFF effect of Levodopa.
5. Explain: Anxiolytics before surgery.
6. Advantages of Inodilators.
7. Treatment of Alcohol withdrawal syndrome.
8. Uses and Contra indications of Opioids.
9. Anti anxiety drugs.
10. Role of Prostaglandins in therapeutics of Glaucoma.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0524] MAY 2024 Sub. Code :6061

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL – SUPPLEMENTARY (CBME)

PAPER I – PHARMACOLOGY - I

Q.P. Code: 526061

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(1+4+10)

1. A 40 Yr old female presents with symptoms of tiredness, sadness, loss of interest, low energy, guilt, change in appetite, suicidal thoughts.
   a) What could be your probable diagnosis?
   b) Classify Antidepressant drugs.
   c) Discuss in detail about the mechanism of action, pharmacological actions, adverse effects and uses of Tricyclic antidepressants.

(3+8+4)

2. 25 years old male with past history of asthma and complaints of coughing, shortness of breath even at night time, chest tightness, wheezing, suggestive of moderate persistent asthma.
   a) Enumerate the drugs used for bronchial asthma.
   b) Describe the mechanism of action, uses and adverse effects of inhaled bronchodilators in therapy.
   c) Write a note on Mast cell Stabilizers.

II. Write Short notes on: **(10 x 5 = 50)**

1. Name some second generation Antihistamines and its advantages.
2. Importance of carvedilol as therapeutic agent.
3. Therapeutic index and its clinical significance.
4. Fixed dose combination of drugs.
5. Explain the principles of Autonomy and beneficence.
6. Write briefly about Tramadol.
7. Intravenous regional anaesthesia.
8. Mechanism of action and adverse effects of directly acting muscle relaxants
9. Explain the pharmacological actions and adverse effects of Nifedipine.
10. Therapeutic uses of digoxin and its adverse effects.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 1224] **DECEMBER 2024** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019 -2020)

SECOND PROFESSIONAL – MBBS (CBME)

PAPER I – PHARMACOLOGY

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(3+6+6)

1. A 30-year-old woman, who has recently joined work as a shift worker in a hospital comes with C/O difficulty in falling asleep and difficulty in maintaining the sleep. Due to disturbed sleep, she feels tired and lethargic the next day. She has no features suggestive of anxiety or depression. A diagnosis of Transient Insomnia is made.
   a) Classify the drugs used as Sedative hypnotics.
   b) Describe the mechanism of action of Benzodiazepines with a suitable diagram.
   c) Enumerate the adverse effects and uses of Benzodiazepines.

(3+6+6)

2. A farmer was brought to the Emergency with H/O spraying Malathion in his farm 2 hours back when he became unconscious. O/E, he was salivating and sweating profusely, tremors and muscle twitching present. Pulse- 96/min, BP-80/60 mmHg. Respiratory system- Bilateral Wheezes, CNS- Muscle weakness present. A diagnosis of Organophosphorus Compound Poisoning was made.
   a) Classify the Anticholinesterases.
   b) Describe the mechanism and clinical features of Anticholinesterase poisoning.
   c) Describe the management of this patient.

II. Write Short notes on: **(10 x 5 = 50)**

1. Management of Status epilepticus.
2. First order kinetics vs. zero order kinetics.
3. Treatment of Smoking cessation.
4. Acute Paracetamol poisoning.
5. Pillars of Bioethics.
6. Succinyl choline.
7. Dabigatran.
8. Potassium channel opener and its use in Angina.
9. Spironolactone.
10. Naloxone.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0325] MARCH 2025 Sub. Code :6061

M.B.B.S. DEGREE EXAMINATIONS
(For the candidates admitted from the Academic Year 2019 - 2020)

SECOND PROFESSIONAL – SUPPLEMENTARY - (CBME)
PAPER I – PHARMACOLOGY

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(3+9+3)

1. 55-year-old male presented with the complaints of tightness and discomfort over middle part of chest, more so after exertion which gets relieved after 5-10 minutes of rest. His BP was 124/82mmHg, pulse 90/min. Stress test was positive, a diagnosis of classical angina was made and he was started on drugs.
    a) Enumerate the drugs used in angina.
    b) Discuss the mechanism of action, uses and adverse effects of Nitrates.
    c) Explain about Nitrate Tolerance and Dependence.

(1+2+3+7+2)

2. A 45-year-old farmer brought with complaints of altered sensorium, breathlessness, Profuse sweating. Attender gives history of spraying of pesticides by him.
    a) What is the diagnosis?
    b) What other signs and symptoms you will look for?
    c) Explain in detail the specific management in this case.
    d) Add a note on ageing of enzyme.

II. Write Short notes on: **(10 x 5 = 50)**

1. Explain the orders of kinetics with example.
2. Write the mechanism of action, uses and adverse effect of Amiodarone.
3. Give the rationale for combining Adrenaline with Lignocaine and write two contraindications for the use of adrenaline.
4. Enumerate second generation Antihistamines. What are its advantages over First generation and write two therapeutic uses?
5. Describe the mechanism of action, uses and adverse effects of Sodium valproate.
6. Pharmacotherapy of Status asthmaticus.
7. Describe the therapeutic uses, adverse effects and contraindications of Morphine.
8. Describe the therapeutic uses of Loop diuretics and what are its drug indications?
9. List the parenteral iron preparations and write its indications.
10. Explain Autonomy and Maleficence in bioethics.

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MBBS 0725] **JULY 2025** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019 - 2020)

SECOND PROFESSIONAL – (CBME)
PAPER I – PHARMACOLOGY

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(3+10+2)

1. A 35-year-old woman presents with C/O Unilateral throbbing headache, which is sometimes preceded by vomiting, anorexia and seeing flashes of light. The headache progressively increases and she takes Tab. Paracetamol to relieve the pain. This headache is recurrent in nature and she gets 3 to 4 episodes in a month. A diagnosis of Migraine is made.
   a) Enumerate the drugs used to treat an acute attack of migraine.
   b) Describe the mechanism of action, adverse effects and pharmacokinetics of Sumatriptan.
   c) Name four drugs used in prophylaxis of Migraine.

(3+9+3)

2. A 20-year-old male patient was brought by his parents with c/o talking to self. He had run away from his house a few days ago and rescued by his neighbours. He gives H/o hearing voices talking to him and commenting on him. He is unable to focus on his work, eat or sleep normally. At times the voice commands him to jump from height. A diagnosis of Paranoid Schizophrenia is made.
   a) Classify the Antipsychotic drugs.
   b) Describe the mechanism of action, adverse effects and uses of Chlorpromazine.
   c) Add a note on management of Drug induced Parkinsonism.

II. Write Short notes on: **(10 x 5 = 50)**

1. Types of receptor antagonism with examples.
2. Transdermal therapeutic systems.
3. Treatment of Benign Hypertrophy of Prostate.
4. Uses of Prostaglandins.
5. Elaborate on the principles of Beneficence and Non maleficence.
6. Montelukast.
7. Halothane.
8. Parenteral iron preparations.
9. Rivaroxaban.
10. Cognition enhancers.

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MBBS 1025] **OCTOBER 2025** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019 - 2020)

SECOND PROFESSIONAL – SUPPLEMENTARY – (CBME)
PAPER I – PHARMACOLOGY

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20 MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(1+3+8+3)

1. 32-year-old female presents with pulsatile headache restricted to one side of the head lasting for 20 hours associated with nausea, vomiting, sensitivity to light and sound.
   a) What is the probable diagnosis?
   b) Enumerate the drugs for the therapy of Migraine.
   c) Discuss in detail about the pharmacological actions, side effects and contraindications of TRIPTANS.
   d) Write a note on Flunarizine.

(4+3+8)

2. 24 year female after intake of Belladonna seeds experiences dry mouth, dry skin, decreased lacrimation, blurring of vision, palpitation and urinary retention.
   a) What is the treatment of above poisoning?
   b) Classify anti cholinergic drugs.
   c) Describe the pharmacological actions, uses and contraindications of Atropine.

II. Write Short notes on: **(10 x 5 = 50)**

1. Clinical pharmacology of dopamine.
2. Zero order kinetics.
3. Describe the essential elements of Communication in patient care.
4. Endogenous opioid peptide.
5. Pentoxiphylline.
6. Halothane as general anaesthetic agent and its adverse effects.
7. Depolarizing blockers.
8. Clinical importance of prostaglandin analogues in labour.
9. Omalizumab.
10. Therapeutic uses of vasopressin analogues and its side effects.

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MBBS 0826] **AUGUST 2026** **Sub. Code :6061**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020 to 2023-2024)

SECOND PROFESSIONAL – CBME
PAPER I – PHARMACOLOGY

Q.P. Code: 526061

Time: Three hours **Maximum: 100 Marks (80 Theory + 20 MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(3+7+5)

1. a) Mention the different types of receptors with examples.
   b) Explain about G protein coupled receptor with illustration.
   c) Differentiate between competitive and non-competitive antagonism.

(3+6+6)

2. A 50-year-old obese male woke up from sleep with excruciating pain in his right toe after having an alcohol party the previous night. On examination, the first metatarsophalangeal joint of the right toe is hot, swollen, red and tender. His serum uric acid level is 8.3mg/dl.
   a) What is the diagnosis? Classify the drugs used in this condition.
   b) Explain the mechanism of action and adverse effects of drugs used in acute gout.
   c) Explain the mechanism of action and adverse effects of drugs used in chronic gout.

II. Write Short notes on: **(10 x 5 = 50)**

1. Adverse effects of typical antipsychotics.
2. Explain the different type of adverse drug reactions with suitable examples.
3. Therapeutic uses of beta blockers.
4. Centrally acting skeletal muscle relaxants.
5. Drugs used in acute heart failure.
6. Mechanism of action, uses and adverse effects of Telmisartan.
7. Mechanism of action and adverse effects of Phenytoin.
8. Advantages and disadvantages of second-generation antihistamines.
9. Informed consent.
10. Low molecular weight heparins.

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