

April-2001

[KD 133]

Sub. Code : 2030

M.D. DEGREE EXAMINATION.

Branch VI — Pharmacology

(Revised Regulations)

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Classify antiviral drugs — Discuss their mechanism of action, therapeutic indications and status in therapy. Add a note on their untoward effects. (25)
 2. Discuss the recent advances in the pharmacotherapy of parkinsonism. Outline their mechanism of action and untoward effects. Add a note on their status in therapy. (25)
 3. Write briefly on : (3 × 10 = 50)
 - (a) Therapeutic drug monitoring — its indications and benefits.
 - (b) Bioequivalence of drugs.
 - (c) Ivermectin — its mechanism of action, uses and untoward effects.
 - (d) Principles of spectrophotometry.
 - (e) Pharmacological rationale in the use of N-Acetyl cysteine in Paracetamol over dosage.
-

November-2001

[KE 133]

Sub. Code : 2030

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe the physiological mechanisms of elimination of water and electrolytes by the kidneys. Explain the mechanisms of action, uses and adverse effects of DIURETICS. (25)
 2. Describe the various steps in the NORADRENERGIC neurotransmission. Explain the mechanisms by which drugs block the transmission. What are the therapeutic usefulness and adverse effects of such drugs. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Drugs inhibiting platelet function.
 - (b) Lovastatin.
 - (c) Newer H-1 receptor antagonists.
 - (d) Prokinetic agents.
 - (e) Praziquantel.
-

March-2002

[KG 133]

Sub. Code : 2030

M.D. (Pharmacology) DEGREE EXAMINATION.

(Revised Regulations)

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the drug therapy in Tuberculosis in developing (underdeveloped) countries with a special note on management of patients resistant to first line drugs. (25)
 2. Discuss the recent advances in the management of Type II or noninsulin dependent diabetes mellitus. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Essential drugs.
 - (b) Use of drugs in pregnancy.
 - (c) Treatment of chloroquine resistant malaria.
 - (d) Emergency contraception.
 - (e) Gene therapy.
-

September-2002

[KH 133]

Sub. Code ! 2030

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Mention the principles of immuno-pharmacology. Discuss in detail the current status of immuno-suppressives in treatment of various diseases. (25)
 2. Discuss the recent advances in the pharmacotherapy of generalized tonic-clonic seizures. Mention the mechanism action, uses and adverse reactions of each class of drugs. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Organophosphorous compounds poisoning and its treatment
 - (b) Foscarnet—mechanism of action and uses
 - (c) Spectrophotometry in pharmacology
 - (d) Drug reservoirs
 - (e) Placental transfer of drugs and its importance.
-

[KI 133]

Sub. Code : 2030

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe antioxidants. Add a note on their physiological and pharmacological relevance. (25)
 2. Write in detail about the recent concepts in adrenergic transmission. Give details of drugs that act as antihypertensives at the sympathetic system. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Role of beta-blockers in congestive cardiac failure
 - (b) Essential drugs
 - (c) Randomization
 - (d) Pravastatin - mechanism of action and current status
 - (e) Enzymes in therapy.
-

[KJ 133]

Sub. Code : 2030

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours **Maximum : 100 marks**

Theory : Two hours and forty minutes	Theory : 80 marks
---	--------------------------

M.C.Q. : Twenty minutes **M.C.Q. : 20 marks**

M.C.Q. must be answered SEPARATELY on the answer sheet provided as per the instructions on the first page.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

1. Describe the Pharmacotherapy of Hyperlipoproteinemias. Add a note on recent drugs also. (15)
2. Describe the drugs affecting the 5 HT system (Agonist and Antagonist). (15)
3. Write briefly on : (10 × 5 = 50)
 - (a) Insulin resistance and its management.
 - (b) Current status of selective COX-2 inhibitors.

- (c) Newer approaches of the drug therapy in CCF.
- (d) Current status of Erythropoietin.
- (e) Anti platelet drugs.
- (f) Current status of Fluroquinolones.
- (g) Platinum compounds in therapy.
- (h) Immunostimulants.
- (i) Infliximab.
- (j) Newer Amphotericin-B formulation and their advantages.

[KL 133]

Sub. Code : 2030

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : (2 × 15 = 30)

(1) Discuss the pharmacological and therapeutic aspects of drugs used in congestive cardiac failure. (15)

(2) Discuss in brief about drugs used for treatment of schizophrenia. (15)

II. Write short notes on : (10 × 5 = 50)

(a) Spectrophotometry in pharmacology.

(b) Newer antimalarials.

(c) **Drugs for pneumocystis carinii infection.**

(d) Enzyme induction.

(e) Ivermectin.

(f) Anti pseudomonal drugs.

(g) **Anti progestins.**

(h) Newer approaches to post-operative analgesia.

(i) **Nicorandil.**

(j) **Fixed dose combinations.**

(10 × 5 = 50)

(2) Give an overview of ocular anatomical and physiological aspects with respect to aqueous humor dynamics. Identify the sites of action of drugs used to reduce Intraocular pressure.

(j) **Pharmacoepidemiology.**

[KO 133]

Sub. Code : 2028

M.D. DEGREE EXAMINATION.

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours **Maximum : 100 marks**

Theory : Two hours and forty minutes	Theory : 80 marks
---	--------------------------

M.C.Q. : Twenty minutes **M.C.Q. : 20 marks**

Answer ALL questions.

I. Essay questions : (2 × 15 = 30)

(1) Describe the molecular models and sites of action of general anaesthetics with regard to ion channels.

(2) Describe the interactions between Monoamines, Gaba and Glutamate in Schizo-Phrenia.

II. Write short notes on : (10 × 5 = 50)

(a) Applied aspects of Vitamin D and its synthetic analogs.

(b) Possible drug actions on adenosine receptors in central nervous system.

(c) Drug polymorphism.

(d) Colony stimulating factors.

(e) **Clinical relevance of orders of kinetics.**

(f) Mechanisms related to reduction in Intra Ocular tension.

(g) Relation of pharmacological actions of Glucocorticoids to their clinical uses and adverse effects.

(h) Mechanisms related to antiemetic effects of drugs.

(i) **Mechanisms of antibacterial action.**

(j) Mechanisms related to inhibition of platelet aggregation.

[KP 133]

Sub. Code : 2028

II. Write short notes on :

(6 × 5 = 30)

M.D. DEGREE EXAMINATION.

Branch VI — Pharmacology

Paper IV — APPLIED PHARMACOLOGY

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

(1) Enzyme inhibition as a target of drug action
— Discuss in relation to chemotherapy. (20)

(2) Explain the physiology of gastric acid secretion and pharmacotherapy of acid peptic disease. (15)

(3) Discuss the therapeutic and diagnostic applications of drugs in ophthalmology. (15)

(a) Treatment of osteoporosis

(b) Pharmacological actions and potential therapeutic uses of melatonin

(c) **Drugs used in obesity**

(d) Contraception in male

(e) **Non-parametric tests**

(f) Newer sedatives and hypnotics.

[KQ 127]

Sub. Code : 2028

M.D. DEGREE EXAMINATION,

Branch VI — Pharmacology

APPLIED PHARMACOLOGY

Common to :

Paper IV — (Old/New/Revised Regulations)

(Candidates admitted from 1988-89 onwards)

and

**Paper IV — (For candidates admitted from 2004-2005
onwards)**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

- 1. Describe the physiology and discuss the potential therapeutic role of Glucagon like peptide-I. (20)**
- 2. Summarize the recent trends on the role of the Nitrenergic nervous system. (15)**
- 3. Describe the pleiotropic effects of statins. (15)**

II. Short notes.

(6 × 5 = 30)

- (a) Corticosteroids as replacement therapy.**
 - (b) Environmental pharmacology.**
 - (c) T cell inhibitors as Immunosuppressants.**
 - (d) Random sampling – Describe.**
 - (e) Radioactive isotopes.**
 - (f) 'Mitotic spindle poisons'.**
-

[KR 129]

Sub. Code : 2026

M.D. DEGREE EXAMINATION.

Branch VI — Pharmacology

APPLIED PHARMACOLOGY

Common To

Paper IV — (Old/New/Revised Regulations)

(Candidates admitted from 1988-89 onwards)

and

Paper IV — (For candidates admitted from 2004-2005 onwards)

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions :

1. Discuss the physiology of gastric acid secretion and how the drugs influence it. (20)
2. Discuss the pathophysiology and management of Alzheimer's disease. (15)
3. Discuss the role of anticytokines in the therapy of rheumatoid arthritis. (15)

II. Write short notes :

(6 × 5 = 30)

- (a) Ergogenics.
 - (b) Estramustine.
 - (c) Carbapenems.
 - (d) Malignant hyperthermia.
 - (e) Curcuma longa.
 - (f) Therapeutic potential of melatonin as a neuroprotector.
-

MARCH 2008

[KS 128]

Sub. Code : 2025

M.D. DEGREE EXAMINATION.

Branch VI — Pharmacology

APPLIED PHARMACOLOGY AND FORENSIC PHARMACOLOGY

Common to all Regulations

Q.P. Code : 202025

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

- I. Essay : (2 × 20 = 40)
1. Discuss the Physio Pharmacology of Central Neurotransmitters.
 2. Discuss Cephalosporins in clinical utility. Discuss the merits and demerits of third generation Cephalosporins as compared to Fluoroquinolones.
- II. Write short notes on : (10 × 6 = 60)
1. Drug therapy of cancer chemotherapy induced vomiting.
 2. Disadvantages of fixed dose combination formulations.
 3. Differential PK and PD of macrolides.
 4. Antioxidants and its therapeutic potential.
 5. Newer approaches in post operative analgesia.
 6. Rational use of drugs.
 7. Newer abortifacants.
 8. Anti Pseudomonal drugs.
 9. Carbon-monoxide.
 10. Unithol.
-

March 2009

[KU 128]

Sub. Code: 2025

M.D. DEGREE EXAMINATION

Branch VI – PHARMACOLOGY

(Common to all candidates)

**Paper IV – APPLIED PHARMACOLOGY AND FORENSIC
PHARMACOLOGY**

Q.P. Code : 202025

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 x 20 = 40)

1. Discuss the structure activity relationship of opioids and opioid antagonists.
Briefly describe the pharmacology of newer mixed agonists and antagonists of opioid receptors.
2. Discuss the pharmacotherapy of first line drugs in the treatment of tuberculosis.

II. Write short notes on : (10 x 6 = 60)

1. Vasopeptidase inhibitors.
2. Pharmacoepidemiology.
3. Newer macrolides.
4. Clinical pharmacology of antiemetics and prokinetic drugs.
5. Drug abuse in sports.
6. Drugs used in glaucoma.
7. Non compartmental pharmacokinetic analysis.
8. New treatments for anxiety disorders.
9. Nutraceuticals.
10. Pharmacological actions and potential therapeutic uses of melatonin.

September 2009

[KV 128]

Sub. Code: 2025

M.D. DEGREE EXAMINATION

Branch VI – PHARMACOLOGY

(Common to all candidates)

**Paper IV – APPLIED PHARMACOLOGY AND FORENSIC
PHARMACOLOGY**

Q.P. Code : 202025

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 x 20 = 40)

1. Describe the drugs affecting potassium channels and their clinical importance.
2. Describe the various types, their location, cellular mechanisms on stimulation, functions and antagonists of alpha receptors.

II. Write short notes on : (10 x 6 = 60)

1. Non renal drug elimination.
2. Clinical importance of perinatal pharmacology.
3. Different methods of preventing platelet aggregation.
4. Newer antiepileptic drugs.
5. Drugs inhibiting gastric acid secretion.
6. Drugs affecting central cholinergic transmission.
7. Newer developments in insulin administration.
8. Camptothecins and taxanes as anti cancer agents.
9. Pharmacoeconomics.
10. Randomization and use of placebo in a drug trial.

March 2010

[KW 128]

Sub. Code: 2025

M.D. DEGREE EXAMINATION

Branch VI – PHARMACOLOGY

(Common to all candidates)

**Paper IV – APPLIED PHARMACOLOGY AND FORENSIC
PHARMACOLOGY**

Q.P. Code : 202025

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 x 20 = 40)

1. Indicate the site of action of diuretics and write how the site and mechanism correlate with clinical use.
2. How will you treat nosocomial infection due to multi drug resistant strain of: **a)** Staphylococcus aureus. **b)** Pseudomonas aeruginosa.

II. Write short notes on :

(10 x 6 = 60)

1. Combination of 5- flucytosine and amphotericin – B.
2. How do you treat acute iron poisoning in a child?
3. Write treatment of poisoning due to strychnine.
4. Correlate the receptor activity with pharmacological action in case of opioids.
5. Haemodialysis.
6. Fast tracking in clinical research.
7. Phenobarbitone overdose.
8. Substance abuse in street children.
9. Toxicity of oestrogens.
10. Cyanide poisoning and treatment

September 2010

[KX 128]

Sub. Code: 2025

M.D. DEGREE EXAMINATION

Branch VI – PHARMACOLOGY

**Paper IV – APPLIED PHARMACOLOGY AND FORENSIC
PHARMACOLOGY**

(Common to all candidates)

Q.P. Code : 202025

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 X 20 = 40)

1. Discuss the methods to evaluate a newly designed antihypertensive drug in Humans.
2. Discuss the Newer Insulins' and their use in clinical practice.

II. Write short notes on :

(10 X 6 = 60)

1. Global Pharmacovigilance.
2. Anti obesity drugs.
3. Over the counter sale of drugs.
4. Drugs inhibiting platelet aggregation.
5. Phenobarbitone overdose.
6. Danazol.
7. Alprazolam over dosage.
8. Substance abuse.
9. Tamoxifen.
10. Insecticide poisoning and its treatment.

MAY 2011

[KY 128]

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

APPLIED PHARMACOLOGY INCLUDING FORENSIC PHARMACY

Q.P. Code : 202025

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. Essay:			
1. Discuss in detail mechanism of action of antidepressants.	6	15	10
2. Discuss the general principles of antimicrobial therapy.	6	15	10
II. Short Questions:			
1. Therapeutic uses of ACE inhibitors.	3	8	5
2. Digitalis as an antiarrhythmic drug.	3	8	5
3. Mechanism of action of lithium.	3	8	5
4. Tobramycin.	3	8	5
5. Succimer.	3	8	5
6. Value of a toxicology laboratory in a hospital.	3	8	5
7. Probiotics.	3	8	5
8. Cyclosporine.	3	8	5
III. Reasoning Out:			
1. Use of gonadotropin releasing hormone in treating infertility.	4	10	5
2. Use of beta adrenergic blockers in migraine.	4	10	5
3. Value of crossover design trials in drug trials.	4	10	5
4. Post-marketing surveillance of new drugs.	4	10	5
IV. Very Short Answers :			
1. Mechanism of action of heparin.	1	4	2
2. James Black.	1	4	2
3. List adverse effects of Clindamycin.	1	4	2
4. List therapeutic uses of spectinomycin.	1	4	2
5. Calcimimetics.	1	4	2
6. Mechanism of action of propylthiouracil.	1	4	2
7. Adverse effects of sirolimus.	1	4	2
8. Mechanism of action of acyclovir.	1	4	2
9. List therapeutic uses of phenylephrine.	1	4	2
10. Mention adverse effects of clonidine.	1	4	2

APRIL 2012

[LA 128]

Sub. Code: 2025

**M.D. DEGREE EXAMINATION
BRANCH VI – PHARMACOLOGY
APPLIED PHARMACOLOGY AND LAWS GOVERNING DRUG
REGULATIONS
Q.P. Code : 202025**

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. Essay:			
1. Briefly describe the surveillance methods used in detecting adverse drug reactions?	9	15	10
2. Discuss the principles of Geriatric clinical pharmacology and therapeutics.	9	15	10
II. Short Questions:			
1. Patient compliance.	3	8	5
2. Drugs offering anesthesia.	3	8	5
3. Mushroom poisoning.	3	8	5
4. Emergency contraception.	3	8	5
5. Performance enhancing drugs.	3	8	5
6. Nitric oxide.	3	8	5
7. Corrosive acid poisoning.	3	8	5
8. Chelation.	3	8	5
III. Reasoning Out:			
1. Plumbism	5	10	5
2. Placental transfer of drugs and its importance.	5	10	5
3. Enzymes in therapy.	5	10	5
4. Mitotic spindle poisons.	5	10	5
IV. Very Short Answers:			
1. What are drugs used in erectile dysfunction?	1	4	2
2. What is the importance of aging of enzyme?	1	4	2
3. Enumerate mood stabilizers.	1	4	2
4. Therapeutic advantage of GLP-I in diabetic mellitus.	1	4	2
5. Role of K channel openers in Angina pectoris.	1	4	2
6. Enumerate glycoprotein II b / III a Receptor antagonists.	1	4	2
7. Explain passive cumulation with example.	1	4	2
8. Natural products in cancer chemotherapy.	1	4	2
9. Rationale of ethanol in methanol poisoning	1	4	2
10. Enumerate the drugs produced by Recombinant DNA technology and their advantages.	1	4	2

(LC 128)

APRIL 2013

Sub. Code: 2025

**M.D. DEGREE EXAMINATION
BRANCH VI-PHARMACOLOGY**

**APPLIED PHARMACOLOGY & LAWS GOVERNING DRUG
REGULATIONS**

Q.P. Code : 202025

Time: Three Hours

Maximum: 100 marks

I. Essay:

(2X10=20)

1. Applied pharmacology of immunosuppressants
2. Role of drugs in the maintenance of calcium homeostasis

II. Short Questions:

(8X5=40)

1. Melatonin
2. Stem cell therapy
3. Therapeutic applications of botulinum toxin
4. Drug therapy of erectile dysfunction
5. Sunscreen
6. Alvimopan
7. HPLC
8. Nanoparticles in pharmacology

III. Reasoning Out:

(4X5=20)

1. Vasodilators in pulmonary arterial hypertension
2. Spironolactone in hypertension
3. Atropine in mushroom poisoning
4. Cheese reaction

IV. Very Short Answers:

(10X2=20)

1. Drugs and cosmetics act
2. Non analgesic use of opioids
3. Advantages of multidrug therapy
4. Jarisch-Herxheimer reaction
5. Uses of methotrexate
6. Twilight sleep
7. Inhaled insulin
8. Drugs for amoebiasis
9. Thrombolytic agents
10. Oral Rehydration Therapy

[LD 128]

OCTOBER 2013

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

APPLIED PHARMACOLOGY & LAWS GOVERNING DRUG REGULATIONS

Q.P. Code : 202025

Time: Three Hours

Maximum: 100 marks

I. Essay:

(2 x 10 = 20)

1. Write in details the current update on GOUT. Mention the Mechanism of action and ADR of corticosteroids.
2. Discuss in detail the pathophysiology and current update on the treatment of hepatitis.

I II. Short Questions:

(8 x 5 = 40)

1. Schedule Y.
2. Human ethics committee function and organization.
3. Treatment of systemic candidiasis.
4. Antibiotic policy.
5. Carbon dioxide uses.
6. Ether.
7. Therapeutic drug monitoring.
8. Biomarkers in therapeutics.

III. Reasoning Out:

(4 x 5 = 20)

1. Drug induced vomiting.
2. Cyclical chemotherapy.
3. Oxygen toxicity.
4. Poisoning and Forced alkaline diuresis.

IV. Very Short Answers:

(10 x 2 = 20)

1. Liniments.
2. Advantages of nebulizer.
3. PUVA therapy.
4. Parenteral Paracetamol.
5. Mouth dissolving tablets.
6. BEST trial.
7. Artificial tear.
8. Mycophenolate Mofetil.
9. Finasteride.
10. Nanotechnology.

(LE 128)

APRIL 2014

Sub. Code:2025

**M.D. DEGREE EXAMINATION
BRANCH VI - PHARMACOLOGY
APPLIED PHARMACOLOGY & LAWS GOVERNING DRUG
REGULATIONS
Q.P.Code: 202025**

Time: Three Hours

Maximum: 100 marks

I. Essay:

(2X10=20)

1. Describe the treatment line of Endocrinal emergencies.
2. Discuss the pharmacology of drug used in Acute Lymphoproliferative disorders.

II. Short Answers:

(8X5=40)

1. Drugs causing movement disorders and their management.
2. Management of Ventricular Arrhythmias.
3. Schedule Y drugs.
4. d-Penicillamine.
5. Merits and demerits of different treatment regimen in HIV therapy.
6. Agents used in treatment of smoking cessation.
7. Newer drugs in anxiety disorder management.
8. Calcimimetics.

III. Reasoning Out:

(4X5=20)

1. N-acetyl cysteine in paracetamol poisoning.
2. Liposome based drug delivery system.
3. Antidepressants in pain management.
4. Proton pump inhibitors in Acid Peptic Disease.

IV. Very Short Answers:

(10X2=20)

1. Treatment of XDR Tuberculosis.
2. Drug therapy of Primary Pulmonary Hypertension.
3. Integrase inhibitors.
4. Role of Nutraceuticals in Diabetes management.
5. Protamine sulphate.
6. Management of Cyanide Poisoning.
7. Drugs causing Hepatocellular damage.
8. Agents used for reducing absorption of poisons.
9. Mechanism of action of Allopurinol.
10. Cheese reaction.

(LF 128)

OCTOBER 2014

Sub. Code:2025

**M.D. DEGREE EXAMINATION
BRANCH VI - PHARMACOLOGY**

**PAPER IV - APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P.Code: 202025

Time: Three Hours

Maximum: 100 marks

I. Essay: (2 x 10 = 20)

1. Discuss the drugs affecting potassium channels and their clinical importance.
2. Discuss in detail the mechanisms of action and adverse effects of antidepressants.

II. Short Questions: (8 x 5 = 40)

1. Pre-screening toxicity tests.
2. National Pharmacovigilance program of India
3. Drug Nomenclature.
4. Oxidative stress.
5. Endothelium derived factors.
6. Nanotechnology.
7. Liposome based delivery systems.
8. Treatment of panic disorder.

III. Reasoning Out: (4 x 5 = 20)

1. Pre-dose sampling for Therapeutic drugs monitoring.
2. Withdrawal of Rofecoxib.
3. New Amphotericin B formulations.
4. Metformin in polycystic ovary disease.

IV. Very Short Answers: (10 x 2 = 20)

1. Adverse effects of Sirolimus.
2. Good clinical practice.
3. List two medicinal plants as sources of antioxidants.
4. Patient compliance.
5. Adverse drug events.
6. Drug Advisory Committee.
7. Ocular drug delivery.
8. Treatment of Panic attacks.
9. Twilight sleep.
10. List four drugs used in treating acne.

[LG 128]

APRIL 2015

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY & LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code : 202025

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

I. Essay: (2 x 10 = 20)

1. Discuss the pharmacological actions and potential therapeutic uses of melatonin.
2. Indicate the site of action of diuretics and explain how the site and mechanism correlate with clinical use.

II. Short Questions: (8 x 5 = 40)

1. Clinical uses of stem cell.
2. Use of PCR in pharmacology.
3. Newer Insulins.
4. Camptothecins as anticancer drugs.
5. Drug abuse in sports.
6. Drugs used in glaucoma.
7. Cross over design drug trials.
8. Mitotic spindle poisons.

III. Reasoning Out: (4 x 5 = 20)

1. Bisphosphonates in Osteoporosis.
2. Determining sample size in drug trials.
3. Rectal route of administering drugs.
4. Naphazoline as nasal decongestant.

IV. Very Short Answers: (10 x 2 = 20)

1. Essential drugs.
2. Glycosylated hemoglobin.
3. Name two safe antidepressants in pregnancy.
4. Name two ovulation inducing agents.
5. Fetal alcohol syndrome.
6. Dermojet.
7. Polypharmacy.
8. Evidence based medicine.
9. Name two NSAIDs used topically.
10. Eutectic lidocaine / prilocaine mixture.

**M.D. DEGREE EXAMINATION
BRANCH VI – PHARMACOLOGY**

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code : 202025

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

I. Essay: (2 x 10 = 20)

1. Describe the pharmacologic agents used in management of Osteoporosis.
2. Discuss in detail the management of hyperlipidemia with current perspectives.

II. Short Questions: (8 x 5 = 40)

1. Drugs and magic remedies act.
2. New drug policy.
3. Enzymes in therapy.
4. Fluoride poisoning.
5. Thrombopoietic growth factors.
6. Acetaminophen intoxication.
7. Management of benign prostatic hypertrophy.
8. Applications of gene therapy.

III. Reasoning Out: (4 x 5 = 20)

1. Protectants in cancer chemotherapy.
2. Special aspects of pediatric pharmacology.
3. Resurgence of thalidomide.
4. Role of official compendia.

IV. Very Short Answers: (10 x 2 = 20)

1. Unithiol.
2. Declaration of Helsinki.
3. Principles of ICH – GCP.
4. Coenzyme Q 10.
5. Treatment of psoriasis.
6. Gingko biloba.
7. Schedule X.
8. Treatment of neurogenic shock.
9. Therapy of vertigo.
10. Orphan drug act.

(LI 128)

APRIL 2016

Sub. Code:2025

**M.D. DEGREE EXAMINATION
BRANCH VI – PHARMACOLOGY**

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P.Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay: (2 x 10 = 20)

1. Discuss briefly clinical issues and perspectives of pharmacotherapy in the elderly.
2. Describe the management of different types of shock.

II. Short Questions: (8 x 5 = 40)

1. Narcotic drugs and psychotropic substances act.
2. New drug policy.
3. Immunostimulants.
4. Management of insomnia.
5. Heavy metal chelators.
6. Cadmium toxicity.
7. Drugs for acne.
8. Treatment of urinary tract infections.

III. Reasoning Out: (4 x 5 = 20)

1. Cytoprotectants in cancer chemotherapy.
2. Hormone replacement in menopause.
3. Role of human immunoglobulins.
4. Resurgence of thalidomide.

IV. Very Short Answers: (10 x 2 = 20)

1. Schedule J.
2. Orphan drug act.
3. Parenteral iron preparations.
4. Official compendia.
5. Stem cell therapy.
6. Treatment of ischemic stroke.
7. Nuremberg code.
8. Uses of magnesium.
9. Belmont report.
10. Xenobiotics.

(LJ 128)

OCTOBER 2016

Sub. Code:2025

**M.D. DEGREE EXAMINATION
BRANCH VI – PHARMACOLOGY**

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P.Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 10 = 20)

1. Discuss the physiology of gastric acid secretion and how drugs influence it.
2. Discuss the principles of Geriatric Clinical Pharmacology and therapeutics.

II. Short Questions:

(8 x 5 = 40)

1. Physiopharmacology of neurotransmitter.
2. Newer mixed agonist-antagonists of Opioid receptors.
3. Platinum compound in therapy.
4. Environmental Pharmacology.
5. Nutraceuticals.
6. Carbon monoxide.
7. Pharmacoepidemiology.
8. Global Pharmacovigilance.

III. Reasoning Out:

(4 x 5 = 20)

1. State of ionization of a drug.
2. Therapeutic drug monitoring of anticonvulsants.
3. Phase IV clinical trials.
4. Implication of pharmacogenomics in oncology.

IV. Very Short Answers:

(10 x 2 = 20)

1. Expiry date.
2. Plumbism.
3. Haemodialysis.
4. Aging of enzyme.
5. Toxic epidermal necrolysis.
6. G6PD Deficiency.
7. Merits and demerits of Desflurane.
8. P-drugs.
9. Institutional Ethics Committee.
10. Drugs and cosmetics act.

(LK 128)

MAY 2017

Sub. Code:2025

**M.D. DEGREE EXAMINATION
BRANCH VI – PHARMACOLOGY**

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P.Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 10 = 20)

1. Describe the role of chronopharmacology in therapeutics.
2. Discuss in detail management of hyperlipidemia with current perspectives.

II. Short Questions:

(8 x 5 = 40)

1. Principles of ICH – GCP.
2. Perinatal pharmacokinetics.
3. Drugs and magic remedies act.
4. New drug Policy.
5. Enzymes in therapy.
6. Myeloid growth factors.
7. Fluride poisoning.
8. Gene therapy.

III. Reasoning Out:

(4 x 5 = 20)

1. Medicinal plants as sources of antioxidants.
2. Aspirin in myocardial infarction.
3. Beta blockers and drug interactions.
4. Resurgence of thalidomide.

IV. Very Short Answers:

(10 x 2 = 20)

1. Unithiol.
2. Contract research organization.
3. Coenzyme Q 10.
4. Dope test.
5. Schedule J.
6. Orphan drug act.
7. Hit and run drugs.
8. Prussian blue.
9. Process of NDA review.
10. Causality analysis.

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P.Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. Give a detailed account of calcineurin inhibitors, biological agents in immune suppression.
2. Discuss about the types of parenteral anticoagulants and its current advances in therapy.

II. Short notes:

(10 x 5 = 50)

1. Hyperbaric oxygen therapy.
2. Nano materials advantages and disadvantages.
3. Antisense oligonucleotides.
4. Pyridoxine in therapy.
5. Toxoids.
6. Endogenous antioxidants.
7. Durham-Humphrey act.
8. Prostanoid receptor.
9. Need of pharmacovigilance.
10. Keratolytics.

III. Reasoning Out:

(4 x 5 = 20)

1. Practice of evidence based medicine model.
2. Compare melanizing and demelanizing agents.
3. Immuno stimulant role in helminthic infection.
4. Importance of Anti Snake venom.

M.D. DEGREE EXAMINATION**BRANCH VI – PHARMACOLOGY****PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS****Q.P. Code: 202025****Time: Three Hours****Maximum: 100 Marks****I. Essay: (2 x 15 = 30)**

1. Mention the major classes of immunosuppressive drugs used in organ transplantation.
What are the general approaches to organ transplantation therapy?
Write in detail about the mechanism of action, adverse effects and uses of Calcineurin inhibitors. Enumerate the recent advances in organ transplant therapy.
2. Pharmacovigilance in India. Scope and objectives of PvPi. Goals of PvPi.
ADR data flow. Assessment of individual case safety reports.

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

1. Aromatase inhibitors.
2. Antibiotic policy.
3. Compensations for research related harm.
4. Research on narcotic drugs in India.
5. Informed consent.
6. Pharmacoeconomic studies.
7. Biological medicinal products.
8. Randomization.
9. Linezolid.
10. NMDA receptor antagonists.

III. Reasoning Out: (4 x 5 = 20)

1. Leucovorin in methotrexate toxicity.
2. Oprelvekin in thrombocytopenia.
3. Lay person in ethics committee.
4. Placebo.

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. a) Enumerate dopamine receptors, subtypes and their distribution.
b) Discuss the pharmacotherapy of dopamine agonists.
2. a) Write in detail about the general principles of drug therapy in pregnant women.
b) Mention the risk category of drugs during pregnancy as per US-FDA.

II. Short notes:

(10 x 5 = 50)

1. Carcinogenesis and chemoprevention.
2. Prescribing in renal disease.
3. St. John's Wort.
4. Drugs and cosmetics act.
5. Autonomic drugs for ophthalmic use.
6. Methods for improving patient compliance.
7. Glucosamine.
8. SGLT 2 inhibitors.
9. Biological medicinal products.
10. Methods of eliminating a poison.

III. Reasoning Out:

(4 x 5 = 20)

1. Imiquimod as immunomodulator.
2. Role of neuraminidase inhibitor in H1N1.
3. Applied aspects of Vitamin – D.
4. Role of triptans in migraine.

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. a) Outline briefly blood coagulation cascade.
b) Discuss the basic pharmacology of indirect thrombin inhibitors.
2. a) Mention the subtypes, location, function subserved by the muscarinic receptors.
b) Discuss the management of Anti-cholinesterase poisoning.

II. Short notes:

(10 x 5 = 50)

1. Off-labelled uses of drugs.
2. Rational prescribing.
3. False neurotransmitters.
4. Co-Q 10.
5. Betablocker overdose.
6. Drug information center.
7. Hypertensive crisis.
8. NDPS act and Rules.
9. Helsinki's declaration and Nuremberg's code.
10. Vasopressin receptor antagonists.

III. Reasoning Out:

(4 x 5 = 20)

1. Pediatric dosage forms and compliance.
2. Therapeutic significance of trace elements.
3. Glucocorticoids in non adrenal disorders.
4. Alkaloids in therapeutics.

[LQ 128]

AUGUST 2020
(MAY 2020 SESSION)

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. Describe in detail the pathophysiology and pharmacotherapy of inflammatory bowel disease
2. a. Outline the physiology of bone mineral homeostasis
b. Describe the current perspectives in the management of osteoporosis

II. Short notes:

(10 x 5 = 50)

1. Principles of combination chemotherapy
2. Systemic retinoids
3. Indian Pharmacopoeia commission
4. Lead optimization
5. Institutional animal ethics committee
6. Carbon monoxide poisoning
7. Protein therapeutics
8. The drugs and magic remedies act
9. Schedule of controlled drugs
10. Rapamycin

III. Reasoning Out:

(4 x 5 = 20)

1. Monoclonal antibodies as immunomodulators
2. Principles of Belmont report
3. Significance of publication ethics
4. Tolerance and dependence in substance use disorder

[MD 0721]

JULY 2021
(MAY 2021 SESSION)

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. a) Explain 'rational prescribing' with examples.
b) Write briefly on "different methods of analysis done in pharmacoeconomics".
2. a) Explain the pharmacological basis of using alpha blockers in pheochromocytoma and benign prostate hypertrophy.
b) How do you manage adverse drug effects caused by alpha blockers?

II. Short notes:

(10 x 5 = 50)

1. Prolactin inhibitors.
2. Teriparatide.
3. Merits of atypical antipsychotics.
4. Phosphodiesterase 3 inhibitors.
5. Heparin antagonist.
6. Penicillinase.
7. Prophylaxis of HIV infection.
8. Spurious drugs.
9. Misuse of antibiotics.
10. Chronopharmacology.

III. Reasoning Out:

(4 x 5 = 20)

1. Selection of laxatives for the elderly population.
2. Use of urinary analgesic.
3. New use of lopinavir.
4. Use of body surface area for fixing the dose.

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

[MD 1121]

**NOVEMBER 2021
(OCTOBER 2021 SESSION)**

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. a) Describe the phosphodiesterase super family and drugs acting on them.
b) Discuss in detail the clinical applications of the drugs.
2. a) What are the drug induced blood Dyscrasias?
b) How will you manage?

II. Short notes:

(10 x 5 = 50)

1. Management of Chronic pain
2. Vitamin Analogues
3. Chelating agents
4. Role of Audiovisual Aids in Teaching
5. Parenteral Non-Insulin Anti-Diabetic Drugs
6. Lefamulin
7. Drugs for VRSA
8. Integrase strand transfer Inhibitors
9. Nafidofuryl oxalate
10. Drugs for Obesity

III. Reasoning Out:

(4 x 5 = 20)

1. Nitroglycerine Biochemical Mechanism of action and tolerance
2. Gonadotrophin for infertility
3. Drug induced hypersensitivity Syndrome
4. Non cardiac uses of Beta Blockers

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

[MD 0522]

MAY 2022

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. a) What are the drugs acting on sodium channels?
b) Discuss in detail the pharmacology and clinical applications.
2. a) Enumerate the immunomodulators?
b) Discuss their therapeutic applications.

II. Short notes:

(10 x 5 = 50)

1. Drugs for thromboprophylaxis.
2. Hyperbaric Oxygen.
3. Effect of sympathomimetics on non vascular smooth muscles and its therapeutic applications.
4. Small group teaching methods.
5. Methods of Insulin delivery.
6. Soft steroids in Bronchial Asthma
7. Resistant Hypertension.
8. Eravacycline.
9. Luminal amoebicides.
10. Anti-Influenza drugs.

III. Reasoning Out:

(4 x 5 = 20)

1. Substitution Therapy in Addiction.
2. Drugs in preterm labour.
3. Radiation Recall.
4. Pain management in opioid addicted individual.

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

[MD 1022]

OCTOBER 2022

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. a) Explain the mechanism of action of drugs used for bronchial asthma.
b) Explain the role of inhaled steroids in bronchial asthma.
2. a) Explain the pharmacological basis of management of hypertensive emergency.
b) Write briefly about rebound hypertension.

II. Short notes:

(10 x 5 = 50)

1. Cox – 2 inhibition.
2. Drugs used for mania.
3. Mineralocorticoid antagonists.
4. Drugs affecting fibrinolytic system.
5. Topical azoles.
6. Causality assessment of ADRs.
7. Schedule H.
8. Ideal chelating agent.
9. Clinical uses of Cyproheptadine.
10. Nicotinic acid.

III. Reasoning Out:

(4 x 5 = 20)

1. “Drug compliance monitoring” in clinical trials.
2. Warfarin is used only for maintenance therapy.
3. ARBs are better than ACE inhibitors in some clinical conditions.
4. Use of Naltrexone for deaddiction.

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

[MD 0723]

**JULY 2023
(MAY 2023 EXAM SESSION)**

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay:

(2 x 15 = 30)

1. Constitution and Procedure for Registration of Institutional Ethics Committee of your Institution Planning to conduct Clinical Trials. Add a note on roles and responsibilities of Member Secretary and Legal Expert.
2. Discuss in detail about Anti-Obesity Drugs.

II. Short notes:

(10 x 5 = 50)

1. Legislative schedules of Drugs and Cosmetics in India.
2. Phase 0 and Phase I Trials.
3. Drug repositioning and repurposing.
4. Ameliorative therapies toxicity of Anticancer Chemotherapy.
5. Drugs used to treat Mucormycosis.
6. PCSK 9 Inhibitors.
7. Post exposure Prophylaxis of HIV.
8. Mechanism to induce Immune Tolerance.
9. Selective Estrogen Receptor Modulators.
10. Current Regulations on Approval, criteria to ban and the regulatory body imposing ban on FDCs in India.

III. Reasoning Out:

(4 x 5 = 20)

1. Informed Consent versus Patient Information Sheet.
2. Orphan drugs – New definition, challenges in development.
3. Limitation of Surrogate end points in clinical trials with examples.
4. Signal Review Panel.

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

[MD 1223]

**DECEMBER 2023
(MAY 2023 EXAM SESSION)**

Sub. Code: 2025

M.D. DEGREE EXAMINATION

BRANCH VI – PHARMACOLOGY

**PAPER IV – APPLIED PHARMACOLOGY AND LAWS GOVERNING
DRUG REGULATIONS**

Q.P. Code: 202025

Time: Three Hours

Maximum: 100 Marks

I. Essay: (2 x 15 = 30)

1. Explain the characteristics of Antibiotics based on which the Dosing is calculated with examples.
2. Discuss in detail about Phosphodiesterase Inhibitors.

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

1. Drug Regulatory System in India.
2. Schedule H Drugs.
3. EGFR Inhibitors in Cancer Therapy.
4. Incretin – mimetics.
5. Endogenous Anti Oxidants.
6. Iclaprim.
7. Flibanserin.
8. Lomitapide.
9. Newer Anti Dyslipidemic Drugs.
10. Treatment of Acute Gout.

III. Reasoning Out: (4 x 5 = 20)

1. Opioid Dependence – Management.
2. Why MAO Inhibitor Administration has to be delayed even after stopping Fluoxetine.
3. FDC of Angiotensin II Receptor blocker and Neprilysin inhibitor.
4. Use of Erythropoietin in Renal Disease.
