

Roll no.

P-2692

M.D. EXAMINATION, APRIL, 2008

M.D. – PHARMACOLOGY

(Paper - I)

(Basic & Clinical Sciences related to Pharmacology, General Pharmacology, Principles of Clinical Pharmacology)

Time : 3 hours

Maximum Marks – 100

Note : Attempt all questions. Attempt all questions and their parts in serial order.

1. Discuss briefly the plan to conduct a Phase - II clinical trial for a compound "Indonumab" that has been developed for use in rheumatoid arthritis. 10 marks
2. Discuss the following : 10 marks each
 - (a) Cytochrome P450 enzyme system
 - (b) Integrins as drug targets
3. Explain the following : 10 marks each
 - (a) Pharmacokinetic – pharmacodynamic correlation
 - (b) Mitochondrial medicine
 - (c) Log dose response curve
4. Write short notes on : 10 marks each
 - (a) Newer indications for older drugs
 - (b) Phase zero clinical trials
 - (c) Nutraceuticals
 - (d) Individualization of drug therapy in organ dysfunction

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M.D. EXAMINATION, APRIL, 2008

M.D. – PHARMACOLOGY

(Paper – II)

(Systemic Pharmacology and Experimental Pharmacology including Biostatistics)

Time : 3 hours

Maximum Marks – 100

Note : Attempt all questions. Attempt all questions and their parts in serial order.

1. Describe the methods for screening of antihypertensive activity of a new compound. 30 marks
 2. Write short notes on : 10 marks each
 - (a) Statistical significant v/s clinical significance
 - (b) Case control study
 - (c) Clinical significance of volume of distribution
 3. Discuss pathophysiology and therapeutics of nitric oxide. 20 marks
 4. Write short notes on : 10 marks each
 - (a) Role of 5HT in health and disease
 - (b) Pharmacovigilance
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M.D. EXAMINATION, APRIL, 2008

M.D. – PHARMACOLOGY

(Paper – III)

(Recent Advances, Pharmacotherapeutics and Toxicology)

Time : 3 hours

Maximum Marks – 100

Note : Attempt all questions and their parts in serial order. Draw figures and diagrams wherever necessary.

1. Describe the pathophysiology and drug therapy of : 20 marks
 - (a) Nausea & Vomiting
 - (b) Osteoporosis
 2. Comment on : 30 marks
 - (a) Therapeutic uses of Eicosanoids
 - (b) Combination therapies in malaria
 - (c) HAART
 3. Describe recent advances in : 30 marks
 - (a) Treatment of Rheumatoid Arthritis
 - (b) Anticoagulant drug therapy
 - (c) Female Infertility management
 4. Write short notes on : 20 marks
 - (a) Drug utilization studies
 - (b) Newer antianginal agents
 - (c) Essential drug concept of WHO
 - (d) Therapeutic window
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M. D. EXAMINATION, April/May 2009

PHARMACOLOGY

Paper First

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt all questions in serial order. Numbers in parenthesis indicate numbers allotted to that question.

1. Discuss the various methods adopted for monitoring of adverse drug reactions. How is the data so obtained useful for pharmacotherapy in human beings ? 16
2. Discuss the following :
 - (a) Dopamine transporter 14
 - (b) Volume of distribution 14
3. Write short notes on the following :
 - (a) Impact factor – principle, calculation and uses 14
 - (b) Toxicogenomics 14
4. Critically evaluate the following :
 - (a) L-Arginine 14
 - (b) Biogenerics 14

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M. D. EXAMINATION, April/May, 2009

PHARMACOLOGY

Paper Second

(Systemic Pharmacology, Therapeutics and Toxicology)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt all questions in serial order. All questions carry equal marks.

1. Describe various therapeutic strategies in the management of diabetes mellitus.
2. Write an essay on therapeutic applications of venoms and toxins.
3. Discuss the following :
 - (a) Newer antipsychotic drugs
 - (b) Drugs for induction of ovulation
4. Write notes on the following :
 - (a) Orphan Drugs
 - (b) Anti-oxidants

M. D. EXAMINATION, April/May, 2009

PHARMACOLOGY

Paper Third

Expt. Pharmacology, Bioassay Screening Meth., Biostatistics)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt questions in serial order.

1. Discuss the experimental evaluation of a new compound for the following : 14 each
 - (i) Hypolipidemic effects
 - (ii) Anti-fertility effects
2. Discuss in brief the following : 14 each
 - (i) Experimental methods for characterization of receptors
 - (ii) Standard physicochemical techniques
3. Write short notes on the following : 14 each
 - (i) Co-relation and Regression analysis
 - (ii) PA_2 value in experimental Pharmacology
4. Discuss the role of pharmacogenetics in drug discovery and its limitations. 16

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M. D. EXAMINATION, April/May, 2009

PHARMACOLOGY

Paper Fourth

(Recent Advances, Therapeutics and Technology)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt questions in serial order.

1. Describe recent advances in Pharmacological Management of the following clinical conditions : 40
 - (i) Partial Epilepsies
 - (ii) Chronic Bronchial Asthma
2. Write briefly on the following : 20
 - (i) Neuropeptides in providing novel therapeutic targets
 - (ii) Tetrogenic 'Torsades de pointes'
3. (a) Discuss Pharmacoepidemiological studies in improving therapeutic outcome. 20
(b) Describe the Hybridoma technique and its use in pharmacotherapy.
4. Critically discuss the following : 10 each
 - (i) *Pseudomonas aeruginosa* systemic infection and its management.
 - (ii) DPP-4 inhibition in management of diabetes mellitus.

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

**MD PHARMACOLOGY
(PAPER ONE)**

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. What is pharmacovigilance? Discuss the current concept of development of pharmacovigilance in India. (20)
- Q. 2. Discuss the role of pharmaco- epidemiology in promoting rational use of drugs. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Revised schedule Y
 - b. Translational medicine
 - c. Contribution of biotechnology in new drug development
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Nanotechnology
 - b. Monoclonal antibody
 - c. Impact factor
 - d. Steady state level
 - e. Challenges in drug evaluation in human subjects.

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

MD PHARMACOLOGY

(PAPER TWO)

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

Illustrate with suitable diagnosis.

- Q. 1. Current status of mood stabilizers. (20)
- Q. 2. Targets of newer antidiabetic drugs. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Monobactams
 - b. Drugs for Neuropathy
 - c. Drugs for Osteoporosis
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Arpiprazole
 - b. Aliskiren
 - c. Dabigatran
 - d. Thalidomide
 - e. Clonidine Revisited

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

**MD PHARMACOLOGY
(PAPER THREE)**

**EXPERIMENTAL PHARMACOLOGY & BIOASSAYS SCREENING METHODS BIOSTATICS
QUESTION RELATED TO THESIS WORK**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. Describe the screening methods for evaluation of analgesic activity. (20)
- Q. 2. Describe the screening methods for evaluation of drugs with abuse potential. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Co-related and regression analysis
 - b. General principles of bioassay
 - c. Drug utilization studies
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Bioequivalence
 - b. Log dose response curve
 - c. Radioimmunoassay (RIA)
 - d. Confidence interval
 - e. Mam Whitney U test

POST GRADUATE DEGREE EXAMINATION, APRIL- 2011

**MD PHARMACOLOGY
(PAPER FOUR)**

**EXPERIMENTAL PHARMACOLOGY & BIOASSAYS SCREENING METHODS BIOSTATICS
QUESTION RELATED TO THESIS WORK**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

- Q. 1. Describe the recent advances in Pharmacological management of partial epilepsies. (20)
- Q. 2. Discuss the drug therapy of Anaerobic Bacterial Infections. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Selective Estrogen Receptor Modulators (SERMs)
 - b. Pharmacology of Adenosine
 - c. Selective Serotonin Reuptake Inhibitors (SSRIs)
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. DPP- IV Inhibitors
 - b. Cox-2 Inhibitors
 - c. Protease Inhibitors
 - d. Retinoids
 - e. Pleiotropic effects of statins

POST GRADUATE EXAMINATION, APRIL- 2012

**MD PHARMACOLOGY
(PAPER ONE)**

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagnosis.

- Q. 1.** Explain with examples- Agonist, Antagonist, Partial agonist and inverse agonist. (20)
- Q. 2.** What are the limitations of premarketing phases of clinical trial. Describe the objectives of phase IV clinical trial. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Therapeutic drug monitoring
 - b. Pharmacogenetics
 - c. Concept of Essential medicines
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Log dose response curve
 - b. DNA recombinant technology
 - c. Drugs recently banned in INDIA
 - d. Ethics committee – composition and responsibilities
 - e. Clinical relevance of microsomal enzyme induction

POST GRADUATE EXAMINATION, APRIL- 2012

**MD PHARMACOLOGY
(PAPER TWO)**

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

Illustrate with suitable diagnosis.

Q. 1. Recent trends in management of Heart Failure. (20)

Q. 2. Current status of gene therapy. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Vasodilator peptides
- b. Management of Parkinson's disease
- c. Drugs against MRSA

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Cytoprotective Drugs
- b. Melatonin
- c. Mecaresmin
- d. Insulin Resistance
- e. Raltegravir

POST GRADUATE EXAMINATION, APRIL- 2012**MD PHARMACOLOGY****(PAPER THREE)****EXPERIMENTAL PHARMACOLOGY & BIOASSAYS SCREENING METHODS BIOSTATICS
QUESTION RELATED TO THESIS WORK**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

Illustrate with suitable diagnosis.

- Q. 1.** Describe the screening methods for evaluation of anti-hypertensive activity. (20)
- Q. 2.** Describe the screening methods for evaluation of drugs with anti depressant activity. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Phase 0 clinical trials
 - b. HPLC
 - c. Non-Parametric tests
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Anti oxidants
 - b. Null hypothesis
 - c. Chemoprophylaxis
 - d. Post marketing surveillance
 - e. Meta analysis

X

POST GRADUATE EXAMINATION, APRIL- 2012

MD PHARMACOLOGY

(PAPER FOUR)

THERAPEUTIC & TOXICOLOGY. RECENT ADVANCES IN PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagnosis.

- Q. 1.** Describe recent advances in pharmacological management of diabetic mellitus. (20)
- Q. 2.** Discuss the drug therapy of endogenous depression. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Phosphodiesterase Inhibitors
 - b. Management of MDR Tuberculosis
 - c. Therapeutic uses of Prostaglandins
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. GP II_b/III_a Inhibitors
 - b. Thalidomide
 - c. Beta-lactamase Inhibitors
 - d. Alfa-2 Adrenergic Receptor Agonists
 - e. Neuraminidase Inhibitors

POST GRADUATE EXAMINATION, MAY- 2013**MD PHARMACOLOGY
(PAPER ONE)****GENERAL & BASIC PHARMACOLOGY**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss the various types of dopamine receptors. How they can be used as target for new drug development? (20)
- Q. 2.** Describe various phases of drug biotransformation. How variation in pharmacogenomics can affect drug response? Explain with suitable examples. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Volume of distribution and its significance
 - Dose response relationship
 - Informed consent
- Q. 4.** Write short notes on: (5 x 6 = 30)
- New drug application and its approval
 - Drug abuse prevention laws
 - Sources of drug information
 - Robert Furchgott
 - Methods adopted to improve bioavailability of drugs

POST GRADUATE EXAMINATION, MAY- 2013

MD PHARMACOLOGY

(PAPER TWO)

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the pharmacology of myocardial ischemia and pharmacology of drugs modulating these mechanisms. Add a note on role of antioxidants. (20)
- Q. 2.** Discuss the challenges for the development of new antimicrobials. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Anti – pseudomonal drugs
 - Pharmacogenomics
 - Anti epileptic modulating glutamatergic transmission.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- Chemical mediators in bronchial asthma
 - Calcineurin inhibitors
 - Current trends in anti-platelet agents
 - Ezetimibe
 - Insulin sensitizer

X

POST GRADUATE EXAMINATION, MAY- 2013**MD PHARMACOLOGY
(PAPER THREE)****EXPERIMENTAL PHARMACOLOGY & BIOASSAYS SCREENING METHODS BIOSTATICS
QUESTION RELATED TO THESIS WORK**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions

Illustrate with suitable diagrams.

- Q. 1.** Describe the screening methods for evaluation of antipsychotic activity. (20)
- Q. 2.** Discuss the evaluation of mutagenic/ carcinogenic toxic potential of a new drug that has been found to possess antihypertensive activity in animal studies. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Spectrophotometry
 - Significance of randomization in clinical trails
 - Acute toxicity studies
- Q. 4.** Write short notes on: (5 x 6 = 30)
- Physiological salt solution used for animal experiments in pharmacology.
 - Schedule X
 - Alternatives to animal experiments
 - Sampling methods
 - Meta analysis

POST GRADUATE EXAMINATION, MAY- 2013

**MD PHARMACOLOGY
(PAPER FOUR)**

THERAPEUTIC & TOXICOLOGY. RECENT ADVANCES IN PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Describe recent advances in the management of diabetes mellitus. (20)

Q. 2. Describe the current drug management of pulmonary hypertension. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Pharmacoepidemiological studies.
- b. Atypical antipsychotics
- c. Neuropathic pain management

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Diuretic resistance
- b. Thalidomide
- c. Rational use of carbapenems
- d. Antibiotic policy
- e. Protease inhibitors

X

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

MD PHARMACOLOGY
(PAPER ONE)

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Write a critical essay on pharmacological principles of drug administration in extremes of age with suitable examples. (20)
- Q. 2.** Write a brief account on mechanism of drug action and relationship of drug concentration and effect. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Personalised medicine
 - Good clinical research practices
 - Orphan drugs
- Q. 4.** Write short notes on: (5 x 6 = 30)
- Off label use of drugs
 - Measures for ensuring rights and safety of clinical trials in India.
 - Stem cell therapy
 - Oxidative stress
 - Teratogenic effects of drugs

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

**MD PHARMACOLOGY
(PAPER TWO)**

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Explain acute coronary syndrome. Describe basis of use of drugs for treatment of unstable angina. (20)
- Q. 2.** Describe latest recommendations on the management of type II DM. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Treatment of bipolar illness.
 - Therapeutic application of melatonin.
 - Fourth generation CCBs.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- Treatment of TDP.
 - Role of spironolactone in treatment of CHF.
 - Ranolazine.
 - Nociception and neurotransmitters.
 - Balanced anaesthesia.

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

MD PHARMACOLOGY
(PAPER THREE)EXPERIMENTAL PHARMACOLOGY & BIOASSAYS SCREENING METHODS BIOSTATICS
QUESTION RELATED TO THESIS WORK

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** How will you screen a new compound for its anti depressant activity. (20)
- Q. 2.** **a.** How will you perform causality assessment of adverse drug events reported for anti-cancer drug?
Discuss various methods of causality assessment. (10)
b. What are the treatment options for patients with various sleep disturbances? How can we screen
sedative – Hypnotic drugs? (10)
- Q. 3.** Describe briefly: (3 x 10 = 30)
a. Alternatives to animal experiments
b. Drug utilization studies
c. Meta analysis
- Q. 4.** Write short notes on: (5 x 6 = 30)
a. Confidence Interval
b. Euthanasia in experimental animal
c. Tests of Mutagenicity
d. Sampling techniques
e. Cross over vs. parallel trial – compare them

POST GRADUATE EXAMINATION, APRIL/ MAY- 2014

**MD PHARMACOLOGY
(PAPER FOUR)**

THERAPEUTIC & TOXICOLOGY RECENT ADVANCES IN PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss in detail emerging target based paradigms to prevent and treat migraine. (20)
- Q. 2.** Discuss recent advances in the anti microbial therapy of MDR staphylococcal infection. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Challenges and opportunities of Academia – industry partnerships
 - b. Vaccines, Malaria: How close are we?
 - c. Emerging therapies for Narcolepsy.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Histone deacetylase inhibitors.
 - b. Darbepoetin.
 - c. Newer SERMs
 - d. mTOR inhibitors
 - e. non-heparin anti coagulants for HIT.

POST GRADUATE EXAMINATION, APRIL - 2015

**MD PHARMACOLOGY
(PAPER ONE)**

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1. Write an essay on the various factors governing rational selection of drug and optimization of dose regimens. (20)
- Q. 2. Write an account of process of clinical development of a new drug in modern context. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- Maternal pharmacokinetics in pregnancy
 - Bioavailability and bioequivalence studies.
 - Strategies to overcome antimicrobial resistance.
- Q. 4. Write short notes on: (5 x 6 = 30)
- Interethnic differences in drug response.
 - Institutional ethics committee.
 - Blood brain barrier
 - Presynaptic receptors
 - Multiple drug therapy

POST GRADUATE EXAMINATION, APRIL - 2015

**MD PHARMACOLOGY
(PAPER TWO)**

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Outline pathophysiology of CHF. Discuss basis of use of drugs for its treatment. **(20)**

Q. 2. Discuss pathophysiology of Parkinsonism and basis of use of drugs for its treatment. **(20)**

Q. 3. Describe briefly: **(3 x 10 = 30)**

- a. Diuretic resistance.
- b. Therapeutic status of Prostaglandin analogs.
- c. Beta adrenergic receptor blockers with additional properties.

Q. 4. Write short notes on: **(5 x 6 = 30)**

- a. Post antibiotic effect.
- b. Gn-RH analogs.
- c. Newer antianginal drugs.
- d. Vasopressin receptor antagonists.
- e. Oral anticoagulants.

POST GRADUATE EXAMINATION, APRIL - 2015

MD PHARMACOLOGY
(PAPER THREE)EXPERIMENTAL PHARMACOLOGY AND BIOASSAYS, SCREENING METHODS, BIOSTATICS
& QUESTION RELATED TO THESIS WORK

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Write a note on Pharmacogenomics. (20)

Q. 2. Briefly discuss the animal models for the screening of anti-fertility drugs. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- Signaling mechanism of receptors.
- Bioassay of 5 HT
- Schedule Y

Q. 4. Write short notes on:

(5 x 6 = 30)

- Null Hypothesis
- Rational drug therapy
- High throughput screening
- CPCSEA
- Compliance

POST GRADUATE EXAMINATION, APRIL - 2015

**MD PHARMACOLOGY
(PAPER FOUR)**

THERAPEUTICS AND TOXICOLOGY, RECENT ADVANCES IN PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe clinical pharmacology and recent advances in the treatment of HIV infection. (20)
- Q. 2.** Describe clinical pharmacology and recent advances in the treatment of type II diabetes mellitus. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Recent advances in Pharmacovigilance Program of India.
 - Zero order kinetics and its clinical significance.
 - Prostaglandin analogues in therapeutics.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- Adaptive clinical trial designs
 - Newer anticoagulants
 - Ethics in drug promotion
 - Add on therapy in tonic clonic seizures
 - Monoclonal antibodies.

POST GRADUATE EXAMINATION, MAY - 2016

**MD PHARMACOLOGY
(PAPER ONE)**

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1. Write history of evolution of Drug Receptor theory. Give an account of discovery of Digitalis. (10+10 = 20)
- Q. 2. Explain the importance of therapeutic drug monitoring with suitable examples. Discuss impact of renal dysfunction on drug disposition and drug action. (10+10 = 20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Pharmacological basis of Drug tolerance
 - b. Organic Anion Transporters
 - c. Synaptic Drug reuptake inhibitors
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Pharmacological basis of Drug addiction
 - b. Microsomal enzyme induction
 - c. Plateau principle
 - d. Rational prescribing of antimicrobials
 - e. Chronopharmacology

X

POST GRADUATE EXAMINATION, MAY - 2016

**MD PHARMACOLOGY
(PAPER TWO)**

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the comparative anti seizure actions and safety profile of various Antiepileptic drugs in relation to their rational therapeutic use in various epilepsies. (20)
- Q. 2.** Describe the drugs that can modulate the urinary bladder functions and show their usefulness in disorders of lower Urinary tract in males. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. CGRP
 - b. Antimicrobial prophylaxis
 - c. Long term adverse effects of Glucocorticoids, their management and prevention
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. Cannabinoids
 - b. Pleotropic effects of Statins
 - c. Topoisomerase inhibitors
 - d. Torsades de Pointes arrhythmias induced by Drugs.
 - e. GLP -1 Receptor agonists

POST GRADUATE EXAMINATION, MAY - 2016

**MD PHARMACOLOGY
(PAPER THREE)**

**EXPERIMENTAL PHARMACOLOGY AND BIOASSAYS, SCREENING METHODS, BIOSTATISTICS
& QUESTION RELATED TO THESIS WORK**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Describe the screening methods for evaluation of Antidiabetic drugs. (20)

Q. 2. Describe the screening methods for evaluation of ant-asthmatic drugs (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Acute toxicity studies.
- b. Ethical issues for conducting clinical trials in special population.
- c. Computational Pharmacology in the current scenario.

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Fusion flicker methods
- b. Dales organ bath
- c. Methods of randomization
- d. Cross over vs parallel trials
- e. Null Hypothesis

X

POST GRADUATE EXAMINATION, MAY - 2016

**MD PHARMACOLOGY
(PAPER FOUR)**

THERAPEUTICS AND TOXICOLOGY, RECENT ADVANCES IN PHARMACOLOGY

[Max Marks: 100]

[Time allotted: Three hours]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Describe the drug utilization studies and their role in rational uses of medicines. (20)
- Q. 2.** Describe therapeutic potential of drugs that modulate 5HT receptors. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- a. Recent advances in treatment of glaucoma.
 - b. Recent advances in treatment of tuberculosis.
 - c. Data safety monitoring board.
- Q. 4.** Write short notes on: (5 x 6 = 30)
- a. Rational antihypertensive drug combinations.
 - b. Antimicrobial resistance.
 - c. Biosimilars
 - d. Monoclonal antibodies in therapeutics
 - e. Sources of drug information

X

POST GRADUATE EXAMINATION, MAY -2017

**MD PHARMACOLOGY
(PAPER ONE)**

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required

- Q. 1.** Describe milestones in the development of pharmacology as a discipline in India. (20)
- Q. 2.** Discuss role of drug transporters in passage of drugs across biological membranes. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Pharmacovigilance
 - b. Cytochrome isotypes and drug disposition
 - c. Implications of zero-order kinetics in clinical medicine
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. Responsibilities of institutional ethics committees
 - b. Reverse pharmacology
 - c. Drug ligand
 - d. Drugs and therapeutics committee
 - e. Drug related factors affecting bioavailability

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD PHARMACOLOGY
(PAPER TWO)**

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required

Q. 1. Discuss in detail vicious epileptogenic mechanism and mediators. Describe potential drug targets for therapeutics intervention of the same. (20)

Q. 2. Discuss in detail current drug treatment for diabetes mellitus and perspectives for the future. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Therapeutics outlook of over active bladder
- b. Calcium channel blockers
- c. Chemoprophylaxis of antimicrobials

Q. 4. Write short notes on: (5 x 6 = 30)

- a. ACEIs in nephropathy
- b. Factor Xa inhibitors
- c. JNC 8 guidelines for hypertension
- d. Potential new antimalarial drugs
- e. Balanced anaesthesia

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD PHARMACOLOGY
(PAPER THREE)**

**EXPERIMENTAL PHARMACOLOGY AND BIOASSAYS, SCREENING METHODS, BIOSTATISTICS
& QUESTION RELATED TO THESIS WORK**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required

Q. 1. Describe the screening method used for evaluation of drugs having potential to be used in Asthma.

(20)

Q. 2. Describe the planning and execution of a phase III clinical trial of a newer analogue of oral sulfonylurea antidiabetic agent in patients of type II diabetes.

(20)

Q. 3. Describe briefly:

(3 x 10 = 30)

- a. Meta-analysis
- b. Mutagenicity tests and their relevance
- c. Bioequivalence studies

Q. 4. Write short notes on:

(5 x 6 = 30)

- a. Pragmatic Trials
- b. Case control studies
- c. Chronic toxicity studies in animals
- d. Non parametric tests
- e. Immunoassays

X

POST GRADUATE EXAMINATION, MAY - 2017

**MD PHARMACOLOGY
(PAPER FOUR)**

THERAPEUTICS AND TOXICOLOGY, RECENT ADVANCES IN PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams wherever required

- Q. 1. Describe briefly drugs used in the treatment of methicillin-resistant Staph-aureus infection. (20)
- Q. 2. Describe briefly gene (GENE) therapy. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Modern life style drugs
 - b. Interferons
 - c. DOT's plus therapy
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Inhaled insulin
 - b. Fospropofol
 - c. Role of anti-IGE monoclonal antibodies in chronic asthma
 - d. Vasopeptidase inhibitors in C.H.F.
 - e. SORD (Selective Oestrogen Receptor Down Regulators)

X

POST GRADUATE (MD/ MS) EXAMINATION, SEPTEMBER/ OCTOBER - 2017

**MD PHARMACOLOGY
(PAPER ONE)**

GENERAL & BASIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Describe different aspects of nitric oxide in disease. (20)

Q. 1. What is Evidence Based Medicine (EVM)? How and why does one grade the strength of evidence in EVM? (20)

Q. 2. Explain: (10+10 = 20)

- a. Generic drugs-Issues and concerns
- b. The importance of SAR and its relevance in therapeutics, using an example

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Receptor theory
- b. Tachyphylaxis
- c. Kinetics of drug elimination

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Auto receptors
- b. Nocebo
- c. P drug
- d. Rationale of therapeutic drug monitoring
- e. Oxysterols

X

POST GRADUATE (MD/ MS) EXAMINATION, SEPTEMBER/ OCTOBER - 2017

MD PHARMACOLOGY
(PAPER TWO)

SYSTEMIC PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Describe different aspects of nitric oxide in disease. (20)

Q. 2. Discuss clinical significant of drugs affecting GABA neurotransmitter. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. General considerations in Cancer Chemotherapy
- b. Out-patient therapy of hypertension
- c. Modafinil

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Low molecular weight heparin
- b. Magnesium as antiarrhythmic drug
- c. Newer beta blockers.
- d. Bradykinin antagonists
- e. Tramadol

X

POST GRADUATE (MD/MS) EXAMINATION, SEPTEMBER/OCTOBER - 2017

MD PHARMACOLOGY
(PAPER THREE)EXPERIMENTAL PHARMACOLOGY AND BIOASSAYS, SCREENING METHODS, BIOSTATISTICS
& QUESTION RELATED TO THESIS WORK

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Describe the screening methods for evaluation of Antidiabetic drugs. (20)

Q. 2. Describe : (10 + 10 = 20)

- a. Screening of antidepressants
- b. Ethics in clinical trials

Q. 3. Describe briefly: (3 x 10 = 30)

- a. LD 50 estimation
- b. Techniques of blinding in research
- c. Micro dosing studies

Q. 4. Write short notes on: (5 x 6 = 30)

- a. β -2 error
- b. CPCSEA guidelines for disposal of dead animals
- c. Chi-square test
- d. Intention to treat analysis
- e. Null hypothesis

X

POST GRADUATE (MD/ MS) EXAMINATION, SEPTEMBER/ OCTOBER - 2017

**MD PHARMACOLOGY
(PAPER FOUR)**

THERAPEUTICS AND TOXICOLOGY, RECENT ADVANCES IN PHARMACOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1.** Discuss in detail approach towards reversing antimicrobial resistance: "Next generation antimicrobials." (20)
- Q. 2.** Describe newer antiepileptic drugs. Explain the relevance of maintaining a seizure diary. (20)
- Q. 3.** Describe briefly: (3 x 10 = 30)
- Treatment of estrogen receptor positive breast cancer
 - SGLT inhibitors
 - Therapeutic interventions for smoking cessation
- Q. 4.** Write short notes on: (5 x 6 = 30)
- Hybridoma technique
 - HAART therapy
 - Biosimilars
 - Impact factor
 - NACO guidelines for treatment of HIV in pregnancy

X