

APRIL - 2001

[KD 715]

Sub. Code : 4203

THIRD B.Pharmacy DEGREE EXAMINATION.

(Common to Third Year — Revised Regulations and
Re-revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours	Maximum : 90 marks
Two and a half hours	Sec. A & Sec. B : 60 marks
for Sec. A and Sec. B	Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the answer in the
answer sheet provided.

SECTION A — ($2 \times 15 = 30$ marks)

Answer any TWO questions.

1. (a) Explain the following with examples :

($4 \times 2 = 8$)

- (i) Plasma protein binding of drugs
- (ii) Zero order kinetics
- (iii) First pass effect on drugs
- (iv) Enterohepatic circulation of drugs.

(b) What is antagonism? Explain the different types of antagonisms with examples. (4)

(c) Describe the mechanism of action of carbamazepine. (3)

2. (a) Classify antiarrhythmic drugs with examples. (5)

(b) List the drugs for angina. Describe the mechanism of action of nitrates. (5)

(c) Describe the mechanism of action of digitalis. (5)

3. (a) Classify opioid analgesics. Compare and contrast morphine with pethidine. (7)

(b) Write briefly on preanaesthetic medication. (3)

(c) Describe the mechanism of action and toxicities of Tricyclic antidepressants. (5)

4. (a) Classify drugs used in the treatment of peptic ulcer. Explain the mechanism of action of any one group. (5)

(b) Briefly describe the process of vomiting. Explain how antiemetic drugs could affect this. (5)

(c) Discuss the mechanism of action and uses of purgatives. (5)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

All questions carry equal marks.

5. Classify Beta-blockers with examples. List four uses of beta-blockers.

6. Classify antiasthmatic drugs. Explain the mechanism of action of any one group.

7. Explain the renin-angiotensin system and the drugs influencing it.

8. Explain the mechanism of action and adverse effects of oral hypoglycemic agents.

9. List the drawbacks of penicillins. Compare and contrast amoxicillin with ampicillin.

10. Classify anti-tubercular drugs. Discuss the importance of combination therapy in Tuberculosis.

11. Explain the poisonings due to Plumbago and Datura. How are these poisonings managed?

12. Define bio-assay. Explain the different types of bioassays with examples. How is insulin bioassayed officially?

13. Write briefly on Ethical committee and Blind trials.

NOVEMBER - 2001

[KE 715]

Sub. Code : 4203

THIRD B.Pharmacy DEGREE EXAMINATION.

Paper III — PHARMACOLOGY AND TOXICOLOGY

**(Common to Third Year — Revised and
Re-Revised Regulations)**

Time : Three hours	Maximum : 90 marks
Two and a half hours	Sec. A & Sec. B : 60 marks
for Sec. A and Sec. B	Section C : 30 marks

Answer Sections A and B in same answer book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Explain the following with examples :
(4 × 2 = 8)
 - (i) Carrier transport.
 - (ii) Bio-inequivalence
 - (iii) Redistribution
 - (iv) Prodrugs.
- (b) What is Synergism? What are the different types? Substantiate with the help of examples. (4)
- (c) Briefly explain the consequences of enzyme induction. (3)

NOVEMBER - 2001

2. (a) Classify antihypertensive drugs with examples. (5)

(b) Discuss the adverse effects and therapeutic uses of propranolol. (5)

(c) Describe the mechanism of action of digoxin. (5)

3. (a) Classify analgesic – antipyretics. (4)

(b) Discuss the mechanism of action and therapeutic uses of aspirin. (6)

(c) What is the role of opioid analgesics in the management of pain? (5)

4. Compare and contrast the following groups of drugs : (5 × 3 = 15)

(a) *d*-tubocurarine and succinyl choline.

(b) Physostigmine and neostigmine.

(c) Morphine and pethidine.

(d) Ephedrine and atropine as mydriatics.

(e) Ampicillin and amoxycillin.

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

All questions carry equal marks.

5. Outline the signs, symptoms and treatment of organophosphorus poisoning.

6. Briefly explain the therapeutic applications of atropine substitutes.

7. Explain the mechanism of action of Methotrexate. Add a note on Leucovorin rescue.

8. Define Bioassay. Outline the procedure for bioassay of insulin.

9. Classify drugs used in the therapy of asthma. Add a note on the role of inhalational agents in the therapy.

10. Classify oral anti diabetics. Discuss the mechanism of action of glibenclamide.

11. Explain the mechanism of action and adverse effects of oral contraceptives.

12. What are preanesthetic medications? Enumerate them and explain the role of each agent.

13. What are fibrinolytics? Classify them and give their therapeutic applications.

MARCH - 2002

[KG 715]

Sub. Code : 4203

THIRD B.Pharmacy DEGREE EXAMINATION.

(Common to Third Year – Revised regulations and Re-revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours	Maximum : 90 marks
Two and a half hours	Sec. A & Sec. B : 60 marks
for Sec. A & Sec. B	Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the same Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Explain the following giving suitable examples : (4 × 2 = 8)

- (i) Active transport
- (ii) Pharmacogenetics
- (iii) Partial agonist
- (iv) Hypersensitivity.

(b) Enumerate the advantages and disadvantages of intravenous drug administration. (3)

(c) Explain four drug-related and four patient-related factors that modify drug action. (4)

MARCH - 2002

2. (a) Describe the synthesis, storage, release and metabolism of noradrenaline. (6)
(b) Classify adrenergic drugs based on their therapeutic uses, giving examples. (5)
(c) Explain the interaction of adrenaline with β -adrenergic receptor. (4)
3. (a) Classify NSAIDs with examples. (6)
(b) Enumerate the uses and adverse effects of aspirin. (5)
(c) Compare and contrast pethidine and morphine. (4)
4. (a) Classify antitubercular drugs with examples. (4)
(b) Explain the mechanisms of action of any two antitubercular drugs. (6)
(c) Write briefly on drugs used in leprosy. (5)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

All questions carry equal marks.

5. Classify drugs used in Parkinsonism and explain the mechanism of action of levodopa.
6. Describe the mechanism of HCl secretion and how drugs affect this process.

7. Write briefly on radioimmunoassay.
8. Explain the mechanisms of development of resistance to antibiotics.
9. Classify oral antidiabetic drugs. Explain their mechanisms of action.
10. Describe the mechanism of action of anticholinesterases. Mention their clinical uses.
11. Explain the mode of action of ACE inhibitors. Enumerate their uses and adverse effects.
12. Classify antiemetics with examples. List the uses and adverse effects of metoclopramide.
13. What are the symptoms of poisoning due to Calotropis and Plumbago? How are they managed?

[KH 715]

Sub. Code : 4203

THIRD B.Pharmacy DEGREE EXAMINATION.

Paper III — PHARMACOLOGY AND TOXICOLOGY

(Common to Third Year Revised and Re-Revised Regulations)

Time : Three hours Maximum : 90 marks

Two and a half hours Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Explain the following terms. Illustrate your answer with examples wherever possible : (5 × 2 = 10)

(i) Blood brain Barrier
(ii) Phase I and Phase II metabolism of drugs

(iii) Half life

(iv) Loading dose

(v) Volume of Distribution.

(b) Explain the term Adverse drug reaction. Illustrate your answer with the help of examples. (5)

2. (a) Define the following terms : (5)

(i) Therapeutic Drug Monitoring

(ii) Neurotransmitter

(iii) Ligand gated Ion channels

(iv) G Proteins

(v) Mydriasis.

(b) Explain the different adrenergic receptor subtypes their distribution and functions. Classify adrenergic receptor agonists and their major therapeutic applications. (10)

3. (a) Classify general anaesthetics and explain the mechanism of action of general anaesthetic. Explain the different stages of anaesthesia and its clinical importance. (10)

(b) Classify anticonvulsants based on their mechanism of action. Write a brief note on any one drug belonging to each class. (5)

4. (a) Explain the major pharmacological actions and mechanism of action of opioid agonists. What are the clinical uses of opioid agonists and antagonists? (10)

(b) Briefly describe the cumulative poisons commonly encountered and the principles in treating victims of cumulative poisoning. (5)

SEPTEMBER - 2002

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

5. Explain the mechanism of action of high ceiling diuretics or loop diuretics. Illustrate your answer with the help of an example.
6. Explain the mechanism of action and untoward effects of angiotensin converting enzyme inhibitors.
7. Explain the mechanism of action and pharmacological properties of proton pump inhibitors.
8. Classify antiarrhythmic drugs and explain their therapeutic application.
9. Classify the different antimalarial drugs and the differences in their therapeutic applications.
10. Classify penicillins and cephalosporins and explain their mechanism of action.
11. Classify the different antineoplastic drugs and explain briefly the mechanism of action of each category.

12. Classify the Hypoglycemic drugs and explain briefly the mechanism of action of each category.

13. Explain the principles of bioassay, the advantages and disadvantages of bioassay.
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[KI 715]

Sub. Code : 4203

THIRD B.Pharm DEGREE EXAMINATION.

(Common to Third Year Revised and
Re-Revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours Maximum : 90 marks
Two and a half hours Sec. A & Sec. B : 60 marks
for Sec. A and Sec. B Section C : 30 marks
Half an hour for Sec. C.

Answer Sections A and B in the **SAME** Answer Book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Explain the following terms. Illustrate your answer with examples whenever possible : (5 × 2 = 10)

- (i) Plasma protein binding.
- (ii) Volume of distribution.
- (iii) Non Linear pharmacokinetics.
- (iv) G Protein coupled receptors.
- (v) Half life

(b) Explain the term bioavailability and bioequivalence. Illustrate your answer with the help of examples. (5)

2. (a) Define the following terms : (5)

- (i) Action potential
- (ii) Muscarinic receptor.
- (iii) Myasthenia gravis.
- (iv) Glaucoma.
- (v) Mydriasis.

(b) Explain the different Cholinergic receptor subtypes their distribution and functions. Classify Cholinergic receptor antagonists and their major therapeutic applications. (10)

3. (a) Classify Analgesics and explain the mechanism of action of each category. (10)

(b) Classify anticonvulsants based on their mechanism of action. (5)

4. (a) Classify Hypnotics and sedatives. Explain the major pharmacological actions and adverse effects and clinical applications of benzodiazepines. (10)

(b) Briefly describe the various commonly encountered household poisons and the method of treating victims of inhaled poisonous gases. (2 + 3)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

5. Classify diuretics based on the mechanism of action. Explain the therapeutic applications of diuretics.

6. Explain the mechanism of action, therapeutic applications and untoward effects of calcium channel blockers.

7. Explain the mechanism of action and pharmacological properties and therapeutic effects of H₂ receptor blockers.

8. Classify antiarrhythmic drugs and explain their therapeutic application briefly.

9. Classify anti emetics and explain their mechanism of action.

10. Explain the mechanism of action and adverse effects of aminoglycosides.

11. Classify the different antineoplastic drugs and explain briefly the mechanism of action of each category.

12. Explain the differences in the mechanism of action and pharmacological properties of biguanides and sulfonylureas.

13. Explain the principles, advantages and disadvantages of bioassay.

OCTOBER - 2003

[KJ 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

(Common to Third Year Revised and Re-Revised
Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

Two hours and forty minutes for Sec. A and Sec. B : 70 marks
for Sec. A and Sec. B

Twenty minutes for Sec. C Section C : 20 marks

Answer Sections A and B in the SAME Answer Book.

Answer Section C in the Answer Sheet Provided.

Answer ALL questions.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO.

1. (a) Classify anticholinergic drugs with examples.
(b) Describe the pharmacological actions, uses and toxicities of anticholinergic drugs. (4 + 11 = 15)
2. (a) Classify nonsteroidal antiinflammatory drugs with examples.
(b) Describe the mechanism of action, adverse effects and uses of nonsteroidal antiinflammatory drugs. (6 + 9 = 15)

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3. (a) Classify anti tubercular drugs with examples. (4)

(b) Explain the mechanisms of action of any two anti tubercular drugs. (6)

(c) Classify drugs used in leprosy. (5)

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT.

4. Describe the mechanism of action of digitalis. Mention its adverse effects.

5. Write briefly on plasma protein binding and its consequences.

6. Describe the mechanisms of action of fluoroquinolones. List their uses.

7. Explain the general methods for treatment of poisoning.

8. What are the principles of bioassay? Describe the bioassay of d-tubocurarine.

9. Describe the mechanism of action of proton pump inhibitors. Mention their adverse effects.

10. With a neat diagram of the nephron, mention the sites of action of various diuretics.

11. Write briefly on drugs employed in the treatment of bronchial asthma.

12. Write briefly on Radio immuno assay.

13. Classify anti emetics and explain briefly on their mechanism of action.

APRIL - 2004

[KK 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

(Common to Third Year Revised and Re-Revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

Sec. A & B : Two hours and
forty minutes

Sec. A & B : 70 marks

M.C.Q : Twenty minutes

M.C.Q : 20 marks

Answer Sections A and B in the SAME Answer Book.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Classify sympathomimetics therapeutically with examples. (6)
(b) Describe the pharmacological actions and uses of epinephrine. (6 + 3 = 9)
2. (a) What are hypnotics and sedatives? Classify them with examples. (1 + 1 + 4 = 6)
(b) Describe the pharmacological actions, adverse effects and uses of barbiturates. (4 + 3 + 2 = 9)

3. (a) Classify cephalosporins with examples. (4)
(b) Describe the mechanism of action, antibacterial spectrum and adverse effects of cefaclor. (3 + 2 + 2 = 7)
(c) Explain the use of clavulanic acid in combination with amoxycillin. (4)

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

4. List out the factors affecting drug absorption and its bioavailability. Describe the influence of any two factors.
5. Describe the adverse effects and contra indications of opioid analgesics.
6. What are the general properties of local anaesthetics? Mention the therapeutic uses of lignocaine.
7. Describe the mechanism of action of *d*-tubocurarine and its effect on skeletal muscle.
8. Classify antihistaminic drugs with examples and list out their therapeutic uses.
9. Describe the mechanism of action of cardiac glycosides and mention the pharmacokinetic differences between digoxin and digitoxin.

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10. What is hypertension? Describe the Stepped Core Approach in Management of Hypertension.
 11. Classify hypoglycaemic agents. List out the indications for insulin therapy.
 12. Describe the symptoms and treatment of acute organophosphorus compound poisoning.
 13. What is clinical evaluation? Describe the various phases of clinical evaluation.
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AUGUST - 2004

[KL 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

(Common to Third Year Revised and Re-Revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

**Sec. A & B : Two hours and
forty minutes**

Sec. A & B : 70 marks

M.C.Q : Twenty minutes

M.C.Q : 20 marks

Answer Sections A and B in the SAME Answer Book.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Define the following : Give examples wherever necessary. (4 × 2 = 8)

- (i) Bioavailability.**
- (ii) Plasma half life.**
- (iii) Pharmacogenetics.**
- (iv) Presystemic metabolism.**

(b) What is Drug tolerance? What are the different types, substantiate with the help of examples? (4)

(c) How can concurrent administration of drugs modify drug action? (3)

2. (a) What are the methods of use of Local anesthetics? Give its mechanism of action. (7)

(b) Classify general anesthetics. Explain the different stages of general Anesthesia. (8)

3. (a) Discuss the pharmacological basis for the following : (4 × 2½)

(i) Neostigmine is preferred to physostigmine in the treatment of myasthenia gravis.

(ii) Losartan in the therapy of hypertension.

(iii) Carbidopa is given along with levodopa.

(iv) Atropine as a preanesthetic medication.

(b) Classify diuretics. List their therapeutic applications. (5)

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

4. Outline the signs, symptoms and treatment of belladonna poisoning.

5. Explain the procedure for bioassay of histamine.

6. Classify drugs used in the therapy of constipation. Add a note on the mechanism of their action.

7. Give the mechanism of action and adverse effects of cotrimoxazole.

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8. What are semi synthetic penicillins? Classify them and add a note on the role of β lactamase inhibitors.
 9. What are the actions of insulins? List out the different insulin preparations and delivery devices.
 10. Discuss the role of Renin-angiotensin system in the body. Add a note on ACE inhibitors.
 11. Classify hypolipidemic drugs. What is the mechanism of action of Lovastatin?
 12. Give the clinical classification of H-1 anti histamines. Add a note on their role in treatment of vertigo.
 13. Discuss the role of multi-drug combinations in the chemotherapy of tuberculosis.
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FEBRUARY - 2005

[KM 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

(Common to Third Year Revised and Re-Revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

Sec. A & B : Two hours and forty minutes Sec. A & B : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

All questions carry equal marks.

1. (a) Explain various forces involved in drug-receptor interaction. (2)
(b) Describe "Plateau principle" using single compartment multiple dosing model. (5)
(c) Describe various factors influencing the dose and response of the drug. (8)
2. (a) Differentiate between peripherally and centrally acting skeletal muscle relaxants with examples. (4)

(b) Write mechanism of action and therapeutic uses of : (6)

(i) Metocurine and

(ii) Dantrolene sodium.

(c) Write a note on antisecretory and antispasmodic atropine substitutes. (5)

3. (a) Classify antineoplastic agents with examples. (3)

(b) Explain mechanism of cytotoxic action of cyclophosphamide. (5)

(c) Write a note on : (4)

(i) Microbial resistance.

(ii) Combination therapy of tuberculosis.

(d) Describe pharmacology of "cotrimoxazole". (3)

4. (a) Describe various therapeutic measures for the management of human poisoning. (5)

(b) Define end point bioassay and describe pharmacopoeial method for bioassay of digitalis. (6)

(c) Describe "Chlorophenothane poisoning" and its management. (4)

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SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

5. (a) Write in brief on :
(i) Biological variation. (2)
(ii) Graded dose response relationship.
(b) Describe one pharmacopoeial method of Insulin bioassay. (3)
6. Explain the drug interactions : (5)
(a) Sulfonamide + Bilirubin
(b) Chloral hydrate + Warfarin
(c) Allopurinol + 6 mercaptopurine
(d) Salicylate + Tolbutamide
(e) Neostigmine + Succinylcholine.
7. (a) Describe signs and symptoms of the poisoning and its management. (4)
(i) Barbiturate poisoning.
(ii) Cyanide poisoning.
(b) Write in brief on "Hemoperfusion". (1)
8. Explain the reasonings :
(a) Why digitalisation is indicated before quinidine therapy in patients with ventricular arrhythmia? (2)

- (b) Why propranolol is preferred in combination therapy in patients of hyperthyroidism? (2)
(c) Why heparin should not be given by intramuscular route? (1)
9. (a) Write mechanism of action of "organic nitrates". (2)
(b) Explain merits and demerits of "thioamides". (2)
(c) Write in brief on "Iodism". (1)
10. (a) Explain mechanism of anticoagulant action of Heparin and Warfarin. (3)
(b) Write in brief on "Antipseudomonal penicillins". (2)
11. (a) Describe various factors influencing selection of antimicrobial agents in the therapy of infectious diseases. (3)
(b) Explain how general anesthetic act. (2)
12. (a) Classify purgatives with examples. (3)
(b) Write a note on "Prokinetics". (2)
13. Classify penicillins and cephalosporins and explain their mechanism of action.
14. Write a short note on mydriasis.

AUGUST - 2005

[KN 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

**(Common to Third Year Revised and
Re-Revised Regulations)**

Paper III - PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

**Theory : Two hours and
forty minutes**

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

I. Long Essay : (2 × 15 = 30)

Answer any TWO questions.

All questions carry equal marks.

**1. (a) Define volume of distribution and explain
its importance with examples. (3)**

**(b) What is biotransformation? Describe the
different phases of biotransformation reaction with
examples. (7)**

**(c) Explain the mechanisms involved in the drug
action through receptors. (5)**

**2. (a) Describe briefly the adrenergic transmission
and drugs affecting it. (6)**

**(b) Classify anticholinesterases and describe
their mechanism of action. (5)**

**(c) Compare and contrast succinylcholine
with d-tc. (4)**

**3. (a) Classify opioid analgesics. Compare and
contrast morphine with pethidine. (7)**

(b) Write briefly on preanaesthetic medication. (3)

**(c) Describe the mechanism of action and
toxicities of tricyclic antidepressants. (5)**

**4. (a) Classify antimalarials based on their
therapeutic utility. (5)**

(b) Write briefly on alkylating agents. (5)

(c) Write a note on bacterial resistance. (5)

II. Short notes : (8 × 5 = 40)

Answer any EIGHT questions.

All questions carry equal marks.

**1. Classify antihypertensive based on their sites of
actions.**

**2. Describe the mechanism of action of local
anaesthetics.**

3. Write briefly on Omeprazole.

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- 4. Classify antihistaminics. List four of their uses.**
 - 5. Discuss the role of multidrug combinations in chemotherapy of tuberculosis.**
 - 6. With a neat picture point out the sites of actions of diuretics. Explain the mechanism of action of potassium sparing diuretics.**
 - 7. Explain the poisoning due to household. How are these poisonings managed?**
 - 8. What is glaucoma? Classify the drugs used in glaucoma.**
 - 9. List the indications of bio-assays. How is digoxin bio-assayed?**
 - 10. Write briefly on clinical trials.**
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FEBRUARY - 2006

[KO 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

**(Common to Third Year Revised and
Re-Revised Regulations)**

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

**Theory : Two hours and
forty minutes**

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

I. Long Essay :

(2 × 15 = 30)

Answer any TWO questions.

All questions carry equal marks.

1. (a) Explain the following terms : (4 × 2 = 8)

(i) Idiosyncrasy

(ii) Synergism

(iii) Bioavailability

(iv) Volume of distribution.

(b) Write briefly on enzyme induction and inhibition. (4)

(c) Mention three advantages and three disadvantages of oral route. (3)

2. (a) Classify antiepileptic drugs with examples.(5)

(b) Explain the mechanisms of action of Phenyton and Valproic acid. (6)

(c) List out the uses of benzodiazepines and name one antagonist. (4)

3. (a) With the help of a diagram indicate the sites of action of antihypertensive drugs. (6)

(b) Explain the mechanism of action of digitalis. (5)

(c) Mention the uses and adverse effects of nitrites. (4)

4. (a) Classify antihistaminics with examples. (6)

(b) Enumerate the uses and toxicities of antihistaminics. (4)

(c) Write briefly on prostaglandins. (5)

II. Short notes : (8 × 5 = 40)

Answer any EIGHT questions.

1. Define bioassay. Explain the principles of bioassays. How is d-Tubocurarine bioassayed?

FEBRUARY - 2006

2. Describe briefly on clinical trials.
3. Classify semi-synthetic penicillins with examples. List out the uses of benzylpenicillin.
4. With a diagram of the nephron indicate the sites of action of diuretics. List out the uses and adverse effects of thiazides.
5. What are the symptoms of organophosphorus poisoning? How is it treated?
6. Explain the mechanism of action of local anaesthetics. Mention the adverse effects of Lignocaine.
7. What are glucocorticoids? Enumerate their uses and adverse effects?
8. Classify antimalarial drugs with examples. Mention the adverse effects of chloroquine.
9. Explain the mechanisms of action of :
 - (a) Methotrexate
 - (b) 5-Fluorouracil.
10. NREM sleep.

AUGUST - 2006

[KP 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

**(Common to Third Year Revised and
Re-Revised Regulations)**

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

**Theory : Two hours and
forty minutes**

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

I. Long Essay : (2 × 20 = 40)

Answer any TWO of the following.

1. What are sympathomimetic agents? Classify them with examples, describe the pharmacology of ephedrine.
2. What are hypnotics and sedatives? Classify them with examples, describe the mechanism of action, pharmacological actions and therapeutic uses of diazepam.
3. Classify oral hypoglycemic agents. Describe the mode of action, adverse drug reactions, pharmacological actions and therapeutic uses of glipizide.

4. What are diuretics? Classify them with examples describe the mechanism of action, effects on renal excretion and therapeutic uses of furosemide.

II. Short notes : (6 × 5 = 30)

Answer any SIX of the following.

1. Describe the signs and treatment of barbiturate poisoning.
2. Write notes on bioassays.
3. Describe the mechanism of action and uses of cotrimoxazole.
4. Explain the protein binding drug-drug interactions with examples.
5. Write notes on antimalarial agents.
6. Classify cephalosporins with examples.
7. Describe the mode of action and therapeutic uses of methotrexate.
8. Write notes on skeletal muscle relaxants.

FEBRUARY - 2007

[KQ 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

**(Common to Third Year Revised and Re-Revised
Regulations)**

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

**Theory : Two hours and
forty minutes**

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

I. Long Essay : (2 × 20 = 40)

Answer any TWO of the following.

1. (a) Classify antihistaminics with examples. (8)

**(b) Enumerate the uses and toxicities of
antihistaminics. (8)**

(c) Write briefly on prostaglandin. (4)

**2. Classify antihypertensive drugs. Discuss the role
of ACE Inhibitors and Diuretics in hypertension.**

**3. Classify the drugs used in Cancer. Discuss the
common side effects of antineoplastic drugs. Add a note
on antimetabolites.**

**4. Discuss the pharmacology of Insulin. Write briefly
about newer Insulin preparations and its advantages.**

II. Short notes : (6 × 5 = 30)

Answer any SIX questions.

- 1. Factors affecting absorption and bioavailability.**
- 2. Drug-receptor theories.**
- 3. Benzodiazepines.**
- 4. Levodopa with carbidopa.**
- 5. Proton pump inhibitors.**
- 6. Bioassay of oxytocin.**
- 7. Pre-anaesthetic medication.**
- 8. Organophosphorous poisoning and its treatment.**

August-2007

[KR 715]

Sub. Code : 4203

THIRD B. Pharm. DEGREE EXAMINATION.

(Common to Third Year Revised and
Re-Revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Time : Three hours

Maximum : 90 marks

Theory : Two hours and
forty minutes

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

I. Long Essay : (2 × 15 = 30)

Answer any TWO of the following.

1. (a) Discuss the phases of cell cycle.
(b) Classify the different anti-neoplastic drugs.
(c) Explain briefly the mechanism of action of each category.
2. (a) What is metabolism?
(b) Explain the different kinds of reactions involved in the biotransformation of drugs.
(c) Write briefly on the factors, which affect drug metabolism.

3. (a) Write the classification of opioid analgesics.
(b) Mention the therapeutic uses and mechanism of action of morphine.
(c) Add a note on morphine poisoning.
4. (a) Write a note on cardiac arrhythmia.
(b) Write different types of arrhythmias.
(c) Classify anti arrhythmic drugs with examples.
(d) Explain the mechanism of action involved in different class of anti arrhythmic agents.

II. Short notes : (8 × 5 = 40)

Answer any EIGHT questions.

1. Brief about of skeletal muscle relaxants.
2. Mention drugs used for peptic ulcer. Classify and explain the mechanism of action of H₂ inhibitors.
3. Write the pharmacological actions, adverse effects and therapeutic uses of prostaglandins.
4. Bioassay of digitalis.
5. Classify diuretics and explain the mode of action and adverse effects of loop diuretics.

6. Write about amino glycoside antibiotics.
7. Pharmacotherapy of Parkinson's disease.
8. Write the pharmacology of oral hypoglycaemic agents.
9. Explain the different types, mode of action, clinical uses and adverse effects of calcium channel blockers.
10. Anti malarial agents.

February-2008

[KS 715]

Sub. Code : 4203

THIRD B. Pharm. DEGREE EXAMINATION.

**(Common to Third Year Revised and Re-Revised
Regulations)**

Paper III — PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

**Theory : Two hours and
forty minutes**

Theory : 70 marks

M.C.Q : Twenty minutes

M.C.Q : 20 marks

I. Long Essay :

Answer any TWO questions.

(2 × 15 = 30)

1. (a) Define bio availability. Explain in brief factors affecting bio availability of drugs.

(b) Mention different routes of drug excretion with examples.

(c) Explain what is enzyme induction with example.

2. (a) Explain pharmacological actions of adrenaline.

(b) Explain symptoms and treatment of belladonna poisoning.

(c) Write uses of Beta – blockers.

3. (a) Classify diuretics with examples.
(b) Explain mechanism of action and uses of frusemide.
(c) Mention uses of calcium channel blockers.
4. Explain mechanism of action and uses of
 - (a) Diazepam
 - (b) Phenytoin.
 - (c) Paracetamol.

II. Short notes :

Answer any EIGHT questions.

(8 × 5 = 40)

1. Explain the terms – Receptor, agonist, antagonist, partial agonist, antagonism.
2. Explain mechanism of action of local anaesthetics.
3. Classify drugs used in treatment of asthma.
4. Explain adverse effects and uses of opioid analgesics.
5. Explain pharmacological actions of Insulin.
6. Explain mechanism of action of methotrexate.
7. Explain why digitalis is called cardiotonic.

8. Outline the principle and procedure for bio assay of Insulin.
 9. Explain why sometimes anti microbial agents are given in combination.
 10. Write briefly on drug allergy.
-

August 2008

[KT 715]

Sub. Code : 4203

THIRD B.Pharm. DEGREE EXAMINATION.

(Common to Third Year Revised and Re-Revised Regulations)

Paper III — PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

I. Long Essay : (2 × 20 = 40)

Answer any TWO questions.

1. (a) Classify the anti-convulsant drugs with examples. (5)

(b) Write the mechanism of action and pharmacological action of phenytoin sodium. (7 + 8 = 15)

2. Write the mechanism of actions, pharmacological actions and adverse reactions of digitalis. (5 + 10 + 5 = 20)

3. (a) Classify the antibiotics with examples. (5)

(b) Write the mechanism of action of sulphonamides. (5)

(c) Write the pharmacological actions of Benzyl penicillin. (5)

(d) Write briefly about co-trimoxazole. (5)

II. Short notes : (8 × 5 = 40)

Answer any EIGHT questions.

1. Write briefly about the parenteral route of drug administration. (2 + 3 = 5)

2. Write briefly about barbiturate poisoning. (5)

3. Write short note on Rauwolfia alkaloids. (5)

4. Explain biphasic response and Dale's vasomotor reversal. (2 + 3 = 5)

August 2008

5. Write the principles of treatment of acute organo phosphorus poisoning. (5)

6. Write the mechanism of action and therapeutic uses of ranitidine. (3 + 2 = 5)

7. Write briefly about 'Aldosterone antagonist'. (5)

8. Write briefly about 'Choleretics'. (5)

9. Write short notes on loperamide. (5)

10. Write the pharmacological actions and therapeutic uses of chloroquine. (3 + 2 = 5)

III. Short answers : (5 × 2 = 10)

Answer any FIVE questions.

Write briefly about

1. Idiosyncrasy. (2)

2. Biotransformation. (2)

3. Plasma half life. (2)

4. Pro-drug. (2)

5. Anemia. (2)

6. Glaucoma. (2)

7. Parkinsonism. (2)

February 2009

[KU 715]

Sub. Code: 4203

THIRD B.PHARM. DEGREE EXAMINATION
(Common to Third Year Revised and Re-Revised Regulations)
Paper III – PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

I. Essay Questions : Answer any TWO questions (2 x 20 = 40)

1. a) Classify Anti-psychotic drugs with examples. (5)
b) Describe the pharmacology and toxicology of chlorpromazine.(10)
c) Write a note on lithium. (5)
2. a) Classify drugs used in hypertension. (5)
b) Discuss the pharmacological actions and adverse effects of β -blockers.(10)
c) Explain the role of angiotensin in hypertension. (5)
3. a) Classify anti-ulcer agents. (5)
b) Explain the underlying reasons for ulcer with the recommended mode of treatment. (10)
c) Describe the drugs acting on respiratory tract. (5)

II. Write Short Notes : Answer any EIGHT questions (8 x 5 = 40)

1. Classify antiviral agents with suitable examples.
2. Describe the mechanism of action of digitalis.
3. Explain the importance of systemic antifungal agents.
4. Classify bioassays and write the principles of bio assay.
5. Describe the toxicity of organophosphorus compounds with symptoms and mode of treatment.
6. Classify anti-arrhythmic agents with atleast two examples for each classification.
7. Describe the treatment regimen for tuberculosis therapy.
8. Describe the pharmacological importance of sodium channel blockers,
9. Describe the pharmacology of anti-anxiety agents.
10. Classify the drugs acting on neuromuscular junction.

III. Short Answers: Answer any FIVE questions (5 x 2 = 10)

1. Define the term biological half life.
2. State any two important factors affecting drug absorption.
3. Name any four nicotinic blockers.
4. Give examples for any four anti-malarial agents.
5. Write any four antielminthtics.
6. Name any four anti-thyroid drugs.
7. Give examples for anti-cancer antibiotics.

August 2009

[KV 715]

Sub. Code: 4203

THIRD B.PHARM. DEGREE EXAMINATION
(Common to Third Year Revised and Re-Revised Regulations)
Paper III – PHARMACOLOGY AND TOXICOLOGY
Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

I. Essay Questions : Answer any TWO questions (2 x 20 = 40)

1. Define receptor. Classify receptor with example. Explain briefly about G-Protein coupled receptor.
2. Define diuretics. Classify diuretics with example. Explain the mechanism of aldosterone antagonist.
3. Write the mechanism of action, pharmacological actions and adverse reaction of aspirin.

II. Write Short Notes : Answer any EIGHT questions (8 x 5 = 40)

1. Anti emetic drugs.
2. Ergot alkaloids.
3. Dale's vasomotor reversal.
4. Pharmacotherapy of myasthenia gravis.
5. Methyldopa.
6. Terlipressin.
7. Semi synthetic penicillin.
8. Oral contraceptives.
9. Write the mode of action and therapeutic uses of albendazole.
10. Write the principles of treatment of atropa belladonna poisoning.

III. Short Answers: Answer any FIVE questions (5 x 2 = 10)

1. Therapeutic index.
2. Anaphylatic shock.
3. Cumulative toxicity.
4. Diabetes insipidus.
5. Traveller's diaorrhea.
6. Extrapyrmidal action.
7. Amnesia.

February 2010

[KW 715]

Sub. Code: 4203

THIRD B.PHARM. DEGREE EXAMINATION
(Common to Third Year Revised and Re-Revised Regulations)
Paper III – PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

I. Essay Questions : Answer any TWO questions (2 x 20 = 40)

1. **a)** Classify the cholinergic drugs with examples. **(5)**
b) Write the pharmacological action of acetylcholine, mechanism of action and therapeutic uses of carbonyl choline. **(15)**
2. What is hyperglycemia? Classify oral hypoglycemic drug. Mechanism of action of phenformin and its adverse effects.
3. **a)** Classify antineoplastic agent with examples. **(5)**
b) Write briefly about semi synthetic penicillin. **(5)**
c) Write the mechanism of action of griseofulvin. **(5)**
d) Write briefly about inhibitors of nucleic acid synthesis. **(5)**

II. Write Short Notes : Answer any EIGHT questions (8 x 5 = 40)

1. Write about the principle of drug design.
2. Explain briefly about metabolism of imipramine.
3. Write in detail the factors affecting gastrointestinal absorption.
4. Write in detail about the special drug delivery system.
5. Write briefly about osmotic diuretics.
6. Write briefly about methylalcohol poisoning.
7. H₂ receptor antagonist.
8. Write about mode of action of caffeine.
9. ACE inhibitors.
10. Cox – 2 inhibitors.

III. Short Answers: Answer any FIVE questions (5 x 2 = 10)

1. Bio equivalence.
2. Local anaesthetics.
3. Ataraxics.
4. Anginopectoris.
5. Glaucoma.
6. Tachyphylaxis.
7. Hamburger's rule.

September 2010

[KX 715]

Sub. Code: 4203

THIRD B.PHARM. DEGREE EXAMINATION
(Common to Third Year Revised and Re-Revised Regulations)
Paper III – PHARMACOLOGY AND TOXICOLOGY
Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

I. Essay Questions : Answer any TWO questions. (2 X 20 = 40)

1. Classify anti hypertensive drugs with examples. Describe the mechanism of action and adverse effects Angiotensing converting enzyme inhibitors.
2. Classify anticonvulsant drugs with examples and explain in detail about the Pharmacological actions and therapeutic uses of Phenytoin.
3. What is peptic ulcer and name the drugs used for the treatment? Explain in details about the mechanism of action and therapeutic uses of Proton Pump inhibitors.

II. Write Short Notes : Answer any EIGHT questions. (8X 5 = 40)

1. Anti-parkinsonism drugs.
2. Classify antihistaminic drugs with examples and mention their therapeutic uses.
3. Design of clinical trails of testing drugs in humans.
4. Stages of general anesthesia.
5. Methotrexate.
6. Mode of action on cotrimoxazole.
7. Beta-lactam antibiotics.
8. Acetazolamide.
9. Mechanism of action of non-steroidal anti-inflammatory drugs.
10. Drugs used for the treatment of cough.

III. Short Answers: Answer any FIVE questions. (5X2 = 10)

1. Define Plasma half life.
2. What is Preanesthetic medication?
3. Define bioassay
4. Define congestive heart failure
5. Define Laxative and Purgative
6. Define analgesic with examples.
7. Hypersensitive reactions.

FEBRUARY 2011

[KY 715]

Sub. Code: 4203

THIRD B.PHARM. DEGREE EXAMINATION

(Common to Third Year Revised and Re-Revised Regulations)

(For the candidates admitted upto 2003-04)

Paper III – PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum : 90 marks

I. Essay Questions : Answer any TWO questions. (2 x 20 = 40)

1. Define absorption. Explain in detail the factors affecting the absorption of drugs.
2. Classify sedatives and hypnotics. Discuss the mechanism of action, therapeutic uses and adverse effects of Diazepam.
3. Classify anti-arrhythmic drugs. Describe in detail the pharmacology of class – Ia antiarrhythmics.

II. Write Short Notes : Answer any EIGHT questions. (8 x 5 = 40)

1. Classify Non-steroidal anti-inflammatory drugs with examples.
2. Antacids.
3. Therapeutic uses of Beta adrenergic receptor blockers.
4. Chloramphenicol.
5. Alkylating agents.
6. Calcium channel blockers.
7. Classify anti-psychotic drugs.
8. Insulin.
9. Bioassay of digitalis.
10. Phases in clinical trials.

III. Short Answers: Answer any FIVE questions. (5 x 2 = 10)

1. Dale's vasomotor reversal.
2. Receptor.
3. Define epilepsy.
4. Disulfuram reaction.
5. Anti-metabolites.
6. Volume of distribution.
7. Cholinergic alkaloids.

August 2011

[KZ 4203]

Sub. Code: 4203

THIRD B.PHARM. EXAMINATION

(Re-Revised Regulations) Candidates Admitted upto 2003-04

Paper III – PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum: 100 Marks

Answer ALL questions.

I. LONG ESSAYS

(2 x 20 = 40)

1. Classify beta adrenergic receptor blocking drugs. Explain the mechanism of action, pharmacological actions and therapeutic uses of propranolol.
2. Classify anticancer drugs. Describe the pharmacology of alkylating agents.

II. SHORT NOTES:

(8 x 5 = 40)

1. Explain the various phase I metabolic reactions.
2. Forces involved in drug-receptor interactions.
3. Describe the stages of general anaesthesia.
4. Anticholinesterases.
5. Classify antihypertensive agents.
6. Explain the various phases of clinical trials.
7. Classify diuretics according to the site of action.
8. Cephalosporins.

III. SHORT ANSWERS:

(10 x 2 = 20)

1. Anaphylaxis.
2. Prodrug.
3. Drugs used in glaucoma.
4. Therapeutic uses of dapsone.
5. Pin-point pupil.
6. Name any four CNS stimulants.
7. Adverse effects of atropine.
8. Examples of anti tussives.
9. Treatment of iron poisoning.
10. Define cardiac arrhythmias.

February 2012

[LA 4203]

Sub. Code: 4203

THIRD B.PHARM. EXAMINATION
(Re-Revised Regulations) Candidates Admitted upto 2003-04
Paper III – PHARMACOLOGY AND TOXICOLOGY

Q.P. Code : 564203

Time : Three hours

Maximum: 100 Marks

Answer ALL questions.

I. Elaborate on:

(2X20=40)

1. a) Define bio-transformation. Explain various synthetic and non synthetic reactions with examples
- b) Classify anti epileptic drugs. Discuss the mechanism of action and uses of sodium valproate.
2. a) Classify anti tubercular drugs with examples. Discuss the mechanism of action, adverse effects of isoniazid. **(15)**
- b. Write briefly about Proton pump inhibitors. **(5)**

II. Write notes on:

(8X5=40)

1. Classify drugs used for angina pectoris.
2. Write symptoms and treatment of organo-phosphorus poisoning.
3. Loop acting diuretics.
4. Explain the mechanism of action of Acyclovir.
5. Bioassay of d-Tubocurarine.
6. Classify anti histamines with examples.
7. Write briefly about oral contraceptives.
8. Write the adverse effects and uses of Diclofenac sodium.

III. Short Answers:

(10X2=20)

1. Plasma half life.
2. Cumulative poison.
3. Gout-disorder.
4. Thyroid inhibitors.
5. Goagulants.
6. Pro kinetic drugs.
7. Toxicities of Cytotoxic drugs.
8. β -Lactamase inhibitors.
9. Myasthenia gravis.
10. Teratogenicity.
