QP Code: 621006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
June 2025
Medicinal Chemistry III
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

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

Essays **(2x10=20)**

1. Explain the SAR of Quinolones and write the synthesis and uses of Ciprofloxacin.
2. Explain the chemistry, stereochemistry and chemical degradation and SAR of Penicillin.

Short Notes **(7x5=35)**

3. Explain the basic concepts of prodrugs.
4. Explain the chemistry of tetracyclines and their uses.
5. Outline the synthesis of Chloramphenicol and its uses.
6. Classify antimalarials with examples.
7. Explain the importance of docking techniques.
8. Explain the mechanism of action of Diethylcarbamazine citrate.
9. Write the synthesis of Miconazole.

Answer Briefly **(10x2=20)**

10. Write the structure of Isoniazid and its uses.
11. Synthesis of Trimethoprim.
12. Write the structure and uses of Acyclovir.
13. Write the mechanism of action of Amphotericin-B.
14. Note on partition coefficient as QSAR parameter.
15. Name any two Macrolide antibiotics with its uses.
16. Outline the synthesis of Pamaquine.
17. Structure and uses of Albendazole.
18. Write the structure of any two antiviral drugs used in HIV infections.
19. A brief note on Hansch analysis.

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CORRECTION / NO-CORRECTION FILE

QPCODE: 622006 **Dated: 25-06-2025**

Question No.19

Replaced with "Write down the mechanism of action and adverse effects of Isoniazid."

Corrections/Modifications/Replacement of Questions if any shall be made available to all students. Take the print out of the Correction File in such cases and distribute to all students.

(Sd/-)

CONTROLLER OF EXAMINATIONS

QP Code: 623006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
June 2025

Herbal Drug Technology
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

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

Essays **(2x10=20)**

1. Describe in detail the WHO guidelines for good agricultural practices of medicinal plants.
2. Explain stability testing of herbal drugs for evaluation under WHO and ICH guidelines.

Short Notes **(7x5=35)**

3. How authentication of herbal material is done.
4. Schedule T.
5. What are the patenting aspects of traditional knowledge and natural products.
6. Enumerate flavorants as herbal excipients.
7. What is an interaction. Classify it.
8. Write a note on Alfa Alfa herb as a health food.
9. Principles in Ayurveda.

Answer Briefly **(10x2=20)**

10. Define patent and biopiracy.
11. Define phytosomes.
12. Enlist names of antioxidants used in herbal cosmetics.
13. What are the interactions associated with Hypericum.
14. What are Prebiotics.
15. Explain role of nutraceuticals in cardiovascular diseases.
16. What are Arista and Asavas. Give suitable examples.
17. What are herbal formulations.
18. Write a note on neem.
19. Name any four medicinal plant based industries.

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QP Code: 624006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
June 2025
Biopharmaceutics and Pharmacokinetics

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

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

Essays **(2x10=20)**

1. Discuss the binding of drugs to plasma proteins. Give the clinical significance of protein binding of drugs.
2. Explain the pharmacokinetics of the one-compartment open model for intravenous infusion injection.

Short Notes **(7x5=35)**

3. Enlist and explain in brief patient-related factors influencing absorption of drugs in the GI tract.
4. Explain the in-vitro dissolution models.
5. Discuss the single-dose versus multiple-dose bioavailability studies.
6. Explain various levels of in vitro – in vivo correction.
7. Discuss the sigma minus method for determination of overall elimination rate constant and renal excretion rate constant.
8. Discuss the two-compartments open model for drug administered by intravenous bolus.
9. Describe factors causing non-linearity in drug absorption.

Answer Briefly **(10x2=20)**

10. What is a concentration gradient and passive diffusion.
11. How do the particle size and effective surface area influence drug absorption.
12. What is biotransformation. Enlist drug-metabolizing enzymes.
13. Define apparent volume of distribution. Write its significance.
14. Define absolute and relative bioavailability.
15. What is the enterohepatic cycle.
16. Write a brief on the individualization of dosage regimen.
17. Briefly explain drug distribution to the brain.
18. What is meant by mean residence time.
19. Write about the dose adjustment in renal failures.

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QP Code: 625006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
June 2025
Pharmaceutical Biotechnology

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

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

Essays **(2x10=20)**

1. Explain the production of vitamin B_{12}. Write a note on large scale fermenter design.
2. Explain general methods of preparation of bacterial vaccines. Add a note on hyper sensitivity.

Short Notes **(7x5=35)**

3. Discuss the various enzyme immobilization techniques with applications.
4. Write a note on blood products and plasma substitute.
5. Write the principle and procedure of ELISA.
6. Explain the aeration and agitation process used in fermentation.
7. Write a note on protein engineering and its applications.
8. Discuss any five microbial biotransformation reactions with examples.
9. Write a note on plasmid and transposons.

Answer Briefly **(10x2=20)**

10. Biosensors.
11. Application of r DNA technology.
12. Short note on immune stimulants.
13. Write the applications of microbial mutation.
14. Define Immunoglobulin.
15. Difference between vaccine and serum.
16. Cloning vectors.
17. Enlist the types of mutation.
18. Name any two commonly used microorganisms used for production of penicillin.
19. Note on collection of blood products.

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QP Code: 622006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
June 2025

Pharmacology III

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

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

Essays **(2x10=20)**

1. Classify anti-ulcer drugs with examples. Describe the mechanism of action, adverse effects and therapeutic uses of proton pump inhibitors.
2. List out the drugs used in the treatment of HIV-AIDS. Explain the mechanism of action, adverse effects and therapeutic uses of zidovudine.

Short Notes **(7x5=35)**

3. Describe expectorants and antitussives with examples.
4. Describe the general principles of chemotherapy of microbial diseases.
5. What is urinary tract infection. Write about the therapy involved to treat UTI.
6. Describe the treatment of leprosy.
7. Write the mechanism of action and adverse effects of Penicillins.
8. Write a note on monoclonal antibodies with examples.
9. Describe briefly on stem cell therapy with suitable examples.

Answer Briefly **(10x2=20)**

10. Classify macrolide antibiotics.
11. List the therapeutic uses of anti-emetics.
12. Write the mechanism of action of albendazole.
13. Write any four applications of gene therapy.
14. Classify laxatives with examples.
15. Treatment of psoriasis.
16. Classify antiamoebic drugs with examples.
17. Write the mechanism of action of Clotrimazole.
18. What are the general adverse effects of anticancer drugs.
19. Define Gene therapy. Write any two its therapeutic uses.

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