QP Code: 421006 **Reg. No……..**

Fourth Semester B.Pharm Degree Supplementary Examinations
March 2025
Pharmaceutical Organic 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 synthesis, chemical reactions and uses of pyridine and indole.
2. Explain the mechanism of Dakin's reaction and Beckmann's rearrangement.

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

3. Explain optical activity and elements of symmetry.
4. Write a note on racemic modification.
5. Explain stereospecific reaction.
6. Explain conformational isomerism in ethane and cyclohexane.
7. Explain the basic behaviour of pyrrole and explain its reactivity.
8. Explain the method of synthesis and reactions of oxazole.
9. Elucidate the mechanism of Clemmensen reduction. Give its synthetic applications.

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

10. Meso compound with examples.
11. Diastereoisomerism with examples.
12. EZ system nomenclature of geometrical isomers.
13. Give any one method of synthesis of thiophene.
14. What are conformational isomers.
15. Any one method of synthesis of furan.
16. Give any one method of synthesis of thiazole.
17. Write the structure of quinoline and acridine. Give any one medicinally important compounds with this basic structure.
18. Birch reduction.
19. Claisen-Schmidt condensation.

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QP Code: 422006 **Reg. No……..**

Fourth Semester B.Pharm Degree Supplementary Examinations
March 2025
Medicinal Chemistry - 1

(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. What is the purpose of Phase-I metabolism. Explain Oxidation and Hydrolysis metabolic reactions of Phase-I with examples.
2. How do you synthesise Phenylephrine and Salbutamol. Write the mechanism of action of these drugs.

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

3. With suitable example explain the effect of optical isomerism and geometrical isomerism of drugs on biological activity.
4. What do you mean by sympathomimetic drugs with mixed mechanism. Give examples and mechanism of action these drugs.
5. What are irreversible Cholinesterase inhibitors. Give examples and mechanism of action.
6. Synthesis and mechanism of action of dicyclomine.
7. Classify anticonvulsant drugs giving the examples. Write the mechanism of action of these drugs
8. What are ultrashort acting barbiturates. Write the structure of one and its mechanism of action.
9. Draw the structure and uses of
   a) Metoprolol b) Malathion c) Thioridazine d) Diclofenac

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

10. What is Phase-II metabolism. Give one example
11. Give a note on Imidazoline containing adrenergic agonists.
12. Write any four important structural features of cholinergic antagonists
13. Structure and uses of chlorpromazine.
14. What is the mechanism of action of Halothane.
15. Enlist any four important classes of NSAIDS.
16. Write any two important structural features of Morphine analogues.
17. Write the structure and uses of Adrenaline.
18. Enlist important effect of Acetylcholine.
19. Mechanism and uses of Narcotic antagonists.

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QP Code: 423006 **Reg. No……**

Fourth Semester B.Pharm Degree Supplementary Examinations
March 2025
Physical Pharmaceutics II

(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. Define order of a chemical reaction. Explain different methods to determine order of a reaction.
2. Define thixotropy. Explain the methods to measure it.

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

3. What is oxidation. Explain different methods to prevent oxidation.
4. Explain different factors influencing settling of particles in suspension.
5. Write the principle and procedure for determination of viscosity by capillary viscometer.
6. Explain plastic and elastic deformation of solids.
7. Explain any four theories of emulsification with suitable examples.
8. Write a note on spreading coefficient.
9. Explain any two Kinetic Properties of Colloids.

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

10. Define Molecularity with example.
11. Define Activation Energy.
12. List out multi-point viscometers.
13. What are shear thickening systems. give example.
14. Define Sedimentation volume.
15. What are the factors to be considered for selection of preservatives for emulsions.
16. Define the term Surface tension.
17. Write any four applications of spreading coefficient.
18. Define critical micellar concentration.
19. What is peptization.

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QP Code: 424006 **Reg. No……..**

Fourth Semester B.Pharm Degree Supplementary Examinations
March 2025
Pharmacology I

(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 biotransformation reactions. Explain non-synthetic or phase 1 reactions
2. Classify antidepressant drugs. Write the mechanism of action and adverse effects of tricyclic antidepressants

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

3. Describe the general effects of α adrenergic blocking drugs
4. Advantages and disadvantages of oral route of drug administration
5. Write the pharmacological actions of alcohol
6. Classify β adrenergic blocking drugs and mention their uses
7. Describe the pharmacological actions of acetylcholine. Add a note on cholinergic receptors.
8. Explain the pharmacological actions and adverse effects of Levodopa
9. Clinical symptoms and management of barbiturate poisoning

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

10. Define addiction and name a drug which causes addiction
11. Explain benzodiazepine antagonist
12. What are atypical antipsychotics
13. Define and classify Adverse drug reactions
14. Combined effects of drugs
15. Define teratogenicity and carcinogenicity
16. Drugs used in myasthenia gravis
17. Classify general anaesthetics
18. Anticholiesterase poisoning
19. What do you mean by circadian rhythm

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QP Code: 425006 **Reg. No……..**

Fourth Semester B.Pharm Degree Supplementary Examinations
March 2025
Pharmacognosy and Phytochemistry I

(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 in detail about the in situ and ex-situ conservation of medicinal plants.
2. a) Explain short note on types of Plant hormones.
   b) Write a brief note on Polyploidy, mutation and hybridization related to medicinal plants.

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

3. Write a short note on chemo and sero-taxonomical classification of drugs.
4. Describe in detail identification tests for alkaloids.
5. Explain about biological source, chemical constituents and uses of Cannabis and jute.
6. Write a short note on source, chemical constituents and evaluation test of chaulmoogra oil.
7. Write a short note on principle of Siddha system of medicine.
8. Discuss marine drugs as a source of anticancer with example.
9. Write a short note on classification of glycosides.

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

10. Write a brief note on scope of Pharmacognosy.
11. Enlist the types of adulteration.
12. Define mutation with example.
13. Enlist the leaf constants.
14. Define volatile oils with example.
15. Write a short note on source and therapeutic uses of gelatin.
16. Enlist the types of treatment methods in Unani system of medicine.
17. Goldbeater's skin test.
18. Define and write a note on functions of gibberellin.
19. Write a note on Papain.

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