QP Code: 421006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations March 2023
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 in detail about atropisomerism.
2. Discuss the reaction, mechanism and applications of Clemmensen reduction and Beckmanns rearrangement.

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

3. Define resolution. Explain two methods of resolution.
4. Write short notes on nomenclature of heterocyclic compounds.
5. Explain aromaticity, basicity and reactions of pyrrole.
6. Give any three methods of preparations of quinoline.
7. Explain electrophilic substitution reactions of pyridine.
8. Write the synthesis of azepines. Mention one derivative containing azepine and its medicinal use.
9. Explain Birch reduction.

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

10. Any two reactions of Furan.
11. Define optical activity.
12. Define Meso compounds.
13. Define enantiomers.
14. Mention any two synthetic reagents used for reduction reactions with chemical structure.
15. Define staggered and eclipsed conformations.
16. Draw the chemical structures of pyrazole, imidazole, oxazole and thiazole.
17. Define Dakin reaction.
18. Any one method of preparation of thiophene.
19. Any one medicinal drug having acridine nucleus.

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QP Code: 422006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations March 2023
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. Explain drug metabolism with examples. Outline the phase one metabolism with suitable examples.
2. Classify parasympathomimetic agents with examples. Give the chemical structures of any two agents from each class. Write the synthesis and mechanism of action of dicyclomine hydrochloride.

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

3. Explain the biological significance of ionization and optical isomerism of drugs.
4. Explain the Structural Activity Relationship (SAR) of sympathomimetic drugs.
5. Give the synthesis, mechanism of action and uses of propranolol.
6. Classify antipsychotics with structural examples.
7. Outline the chemical synthesis and mechanism of action of ketamine hydrochloride.
8. Classify anti-inflammatory drugs with structural examples.
9. Give the structures and uses of
   ● Phenylephrine ● Carbachol ● Diazepam ● Carbamazepine ● Acetaminophen.

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

10. Explain any two factors affecting the drug metabolism.
11. What are adrenergic antagonists.
12. List any two important structural requirements for cholinergic blocking drugs.
13. Outline the mechanism of action of cholinesterase inhibitors.
14. Enlist the barbiturate class of sedatives and hypnotics along with their structures.
15. Write the chemical structure and uses of ethosuximide.
16. List important structural requirements for phenothiazine class of antipsychotic drugs.
17. Write the chemical structure and uses of methohexital sodium.
18. Give a note on morphine analogues.
19. Outline the chemical synthesis of mefenamic acid.

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QP Code: 423006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations March 2023
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. Explain the various theories of emulsification
2. Discuss the optical and kinetic properties of colloids

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

3. What is oxidation and explain its method of prevention
4. Explain different methods of evaluation of stability of emulsions
5. What are surfactants. Classify them with suitable examples
6. Stability problems of emulsion
7. Derive an equation for Donnan membrane equilibrium
8. Derive an equation for second order reaction kinetics
9. Illustrate Ostwald viscometer with its working.

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

10. Define stress and strain
11. What are non-Newtonian liquids
12. Why emulsions are thermodynamically unstable
13. What is physical adsorption
14. Define Critical Micelle Concentration
15. What is rheopexy.
16. Define half life
17. Define plastic and elastic deformation
18. What are deflocculated suspensions
19. Define zero order reaction with examples.

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QP Code: 424006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations March 2023
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. Discuss the various routes of drug administration. Write the advantages and disadvantages of oral route.
2. Define Parkinson's disease and classify anti- Parkinson's drugs. Explain the actions and adverse effects of Levodopa

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

3. Classify anticholinesterases. Mention their uses
4. Discuss the pharmacological actions of morphine
5. Write a note on MAO- B inhibitor.
6. Define glaucoma. Write note on drugs for glaucoma
7. Explain the mechanism of action and adverse effects of tricyclic antidepressants
8. Explain the pharmacokinetic drug interaction
9. Classify general anesthetics and add a note on stages of anesthesia

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

10. What are cholinesterase re-activators
11. Mechanism of action of benzodiazepine
12. Define mydriatics and miotics
13. Classify biotransformation reactions.
14. List four therapeutic uses of β adrenergic blocking drugs
15. Phases of clinical trials
16. Name four anti-anxiety drugs
17. Differentiate between drug addiction and drug tolerance.
18. Mention factors that modify drug action
19. Give two examples each for agonist and antagonist

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QP Code: 425006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations March 2023
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 cultivation, collection, processing and storage of drugs of natural origin.
2. Define plant tissue culture and explain in detail about types of culture, nutritional requirements for growth and their maintenance.

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

3. Write a short note on chemical and pharmacological classification of drugs.
4. Explain in brief about physical methods of evaluation of crude drugs.
5. Write the identification tests for flavonoids and tannins.
6. Explain about biological source, chemical constituents and uses of Veratrum and tobacco.
7. Write the source, chemical constituents, chemical tests and uses of gelatin.
8. Write a short note on principle of Chinese system of medicine.
9. Discuss marine drugs as a source of cardiovascular agents with example.

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

10. Define Pharmacognosy.
11. Write a note on drug adulteration.
12. Define polyploidy.
13. Define in situ conservation of medicinal plants.
14. Define glycosides with examples.
15. Write a brief note on source and therapeutic uses of castor oil.
16. Write a brief note on source and therapeutic uses of papain.
17. Role of pharmacognosy in Siddha system of medicine.
18. Enlist the methods used to determine the leaf constant.
19. Define and write a note on functions of cytokinin.

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