QP Code: 421006 **Reg. No……**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations December 2024
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. Describe in detail the reaction with mechanism for Wolff Kishner and Dakin reaction.
2. What is racemic modification. How can you resolute racemic mixture.

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

3. Give RS system of nomenclature of optical isomers with sequence rules.
4. Write a note on stereospecific and stereoselective reaction.
5. Explain partial and absolute asymmetric synthesis.
6. Outline the synthesis and medicinal uses of pyrrole.
7. Write the importance of $LiAlH_4$ in metal hydride reduction.
8. Enumerate the reaction and mechanism for Schmidt rearrangement.
9. Write the synthesis, properties and medicinal use of pyrimidine and mention its derivatives.

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

10. Differentiate chiral and achiral molecule.
11. Explain E and Z isomers with suitable example.
12. Draw conformers of ethane.
13. Write any two synthetic procedures for preparation of pyrrole.
14. Draw structure of any two five-member heterocyclic compound and their use
15. Give chemical reaction used for conversion of Aldehyde directly into Alkane.
16. Give structure of purine, Acridine, Imidazole and Indole.
17. Explain D&L system of nomenclature of optical isomers.
18. Draw the structures of boat and chair forms of cyclo hexane.
19. Explain Syn & Anti Conformations.

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CORRECTION / NO-CORRECTION FILE

QPCODE: 422006 Dated: 11-12-2024

Question No.2

Modified as "Define and classify sedative and hypnotics with examples. Outline the chemical synthesis and mechanism of action of barbital."

Question No.6

Modified as "Classify antipsychotics with examples and structures."

Question No.12

Modified as "Give a note on distribution of cholinergic receptors."

Question No.18

Modified as "Give the name and uses of a narcotic antagonist."

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: 422006 **Reg. No……..**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations December 2024
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 the term drug metabolism. Outline the phase II metabolic reactions with examples. Write a note on protein binding of drugs in relation to drug action.
2. Define and classify sedative and hypnotics with structural examples. Outline the chemical synthesis and mechanism of action of barbital.

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

3. Explain the significance of hydrogen bonding and chelation of drugs in relation to biological activity.
4. What are beta-adrenergic blockers. Explain the Structural Activity Relationship (SAR) of beta-adrenergic blockers.
5. Outline the chemical synthesis of carbachol and neostigmine.
6. Classify antipsychotics with structural examples.
7. Outline the chemical synthesis and mechanism of action of halothane.
8. Explain the mechanism of action of anti-inflammatory agents. Outline the synthesis of ibuprofen.
9. Outline the chemical synthesis and mechanism of action of fentanyl citrate.

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

10. Any two examples of bioisosteric replacement in relation to biological action.
11. Classify sympathomimetic agents.
12. Give a note on functions of cholinergic transmission.
13. Outline the synthesis of dicyclomine hydrochloride.
14. Give the structure and uses of two ultra-short acting barbiturates
15. Explain the mechanism of action of carbamazepine.
16. Chemical structure and uses of gabapentin.
17. Explain the mechanism of action of ketamine hydrochloride.
18. Name and explain the uses of narcotic antagonist.
19. Write the structure and uses of meperidine.

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QP Code: 423006 **Reg. No……**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations December 2024
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 orders of a reaction. Deduce an equation for the rate constant and half life of first order reaction.
2. Define Rheology. Explain Non-Newtonian systems with example.

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

3. Explain the influence of temperature on stability of pharmaceutical dosage forms.
4. Explain different theories of emulsification.
5. Explain the principle and procedure involved in the determination of viscosity by capillary viscometer.
6. Write a note on deformation of solids with suitable example.
7. Explain the factors affecting sedimentation of dispersed particles in suspension.
8. What are surfactants and classify them with suitable examples.
9. Differentiate the characteristics of different types of Colloids.

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

10. Define shelf life and half-life.
11. Calculate the half-life for the first order reaction whose rate constant is 1.052x10-3 Sec-1.
12. What is Kinematic viscosity and mention its unit
13. What are shear thinning systems: give example.
14. Write the difference between flocculation and coalescence.
15. What are detergents.
16. Define Surface free energy.
17. Name any two methods for purification of colloids.
18. Define Gold Number.
19. Define adsorption isotherm.

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CORRECTION / NO-CORRECTION FILE

QPCODE: 424006 Dated: 16-12-2024

Question No.16

Replaced with "Define cross-tolerance and tachyphylaxis."

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: 424006 **Reg. No……..**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations December 2024
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. Describe the mechanism of transport of drugs across cell membrane with examples. Explain Enzyme induction with examples.
2. Classify parasympathomimetics with examples. Describe the pharmacological actions, adverse effects and therapeutic uses of acetyl choline.

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

3. Describe briefly adverse drug reactions.
4. Write about carcinogenicity and mutagenicity.
5. Explain drug interaction.
6. Describe the synergism and antagonism with examples.
7. Write the mechanism of action and adverse effects of benzodiazepines.
8. Describe briefly the management of barbiturate poisoning.
9. Classify anti-psychotics along with their therapeutic uses.

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

10. Define drug addiction and drug tolerance.
11. Classify sympatholytics.
12. Write about centrally acting muscle relaxants.
13. Write about hallucinogens.
14. Classify neurotransmitters.
15. What is drug abuse. Write any four examples of abused drugs.
16. Define drug tolerance and drug dependence.
17. List any four examples of anticholinesterases.
18. How ethyl alcohol is effective in treating methanol poisoning.
19. Classify antidepressant drugs.

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QP Code: 425006 **Reg. No……**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations December 2024
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. Discuss in detail the Ex situ methods of conservation of medicinal plants.
2. Give a detailed account of various leaf constants with suitable examples.

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

3. History of Pharmacognosy
4. Edible vaccines
5. Identification tests for Flavonoids and Tannins
6. Historical developments of plant tissue culture
7. Calibration of eye piece micrometer
8. Plant hormones as growth promoters
9. Source, constituents and uses of Starch and Honey

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

10. Contributions of Charaka and Sushrutha
11. Define allergens with examples
12. Types of Camera Lucida
13. Methods of drying of medicinal plants
14. Classification of Resins with examples
15. Organoleptic evaluation
16. Preparation of medicinal castor oil
17. Differentiate between Proteins and Enzymes with examples
18. Colchicine and its uses
19. Goldbeater's skin test

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