QP Code: 421006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations February 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. Explain racemic modification and the methods for the resolution of racemic mixtures with examples.
2. Elaborate on geometrical isomers and the methods of determining the configuration of geometrical isomers.

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

3. Explain chiral and achiral molecules with examples.
4. Explain syn and anti-system of nomenclature of geometrical isomers.
5. Give the methods of synthesis, reactions and uses of thiophene.
6. What are heterocyclic compounds. Classify them with examples.
7. Explain Skraup synthesis of quinoline with the mechanism.
8. Explain the synthesis and chemical reactions of indole.
9. Explain the mechanism of Schmidt rearrangement.

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

10. What are the different conformational isomers of cyclohexane.
11. Partial asymmetric synthesis.
12. Atropisomerism.
13. Cis-trans system of geometrical isomers.
14. Explain any one method of synthesis of furan.
15. Explain Chichibabin reaction.
16. Give the synthesis and uses of acridine.
17. Basicity of pyridine.
18. Metal hydride reduction.
19. Wolff-Kishner reaction.

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QP Code: 422006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations February 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. What are Beta blockers. Give examples. Explain important structure activity relationship features. How do you synthesise Propranolol.
2. Explain Hydrogen bonding and Protein binding of drugs and their effect on biological activity with example.

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

3. What is bioisosterism. Classify and give examples
4. Indirectly acting sympathomimetic agents. Give structure and mechanism of action of any one drug.
5. What are Solonaceous alkaloids. Give examples and their mechanism of action.
6. Write a note on reversible Cholinesterase inhibitors giving examples and mechanism of action
7. Classify antipsychotic agents giving examples for each class. Write the general mechanism of action and uses of these drugs.
8. Draw the structure and uses of
   a) Salbutamol. b) Ibuprofen. c) Methacholine d) Methadone.
9. Explain the SAR of barbiturates.

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

10. Enlist any four factors effecting metabolism of drugs.
11. Distribution of cholinergic receptors in body.
12. How do you synthesise Carbachol.
13. Write the structure of Chlordiazepoxide and give its mechanism of action.
14. Give the synthetic route for Diphenylhydantoin.
15. Write the general mechanism of action of NSAIDS
16. Write the structure and uses of Physostigmine.
17. Structure and uses of Glutethimide.
18. Write the chemical structure and uses of Ephedrine.
19. Enlist important effect of Adrenaline.

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QP Code: 423006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations February 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. Explain various adsorption isotherms with a graphical representation
2. Classify colloids and explain its general properties.

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

3. What is hydrolysis and explain the method of prevention of hydrolysis
4. Illustrate falling sphere viscometer with description of its working
5. Write a note on HLB number of surfactants. Explain any one method for the determination of the same
6. Derive an equation for first order reaction rate constant
7. Explain accelerated stability studies
8. Enlist advantages and disadvantages of emulsion
9. Discuss the concept of controlled flocculation

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

10. Define gold number
11. Classify viscometer with examples
12. What are surfactants and mention their applications
13. Define contact angle
14. Classify emulsions
15. What is a rheogram
16. Define shelf life
17. Define first and second order of reaction
18. What are Newtonian liquids. Give examples
19. What is chemical adsorption

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QP Code: 424006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations February 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. Define opioids analgesic and classify it. Explain the pharmacological actions and adverse effects and therapeutic uses of morphine
2. List the various routes of drug administration. Write the advantages and disadvantages of intravenous route.

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

3. Pharmacological actions of ethyl alcohol. Add a note on disulfiram
4. Write a note of acute barbiturate poisoning and its treatment
5. Discuss stages of anesthesia. Brief on pre-anesthetic medication
6. Describe the mechanisms of anticonvulsant action
7. Explain the pharmacology of lithium carbonate
8. Detail the pharmacological actions of adrenaline
9. What do you mean by biotransformation. Classify biotransformation reactions

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

10. Define synergism and tachyphylaxis with examples
11. G-protein coupled receptors
12. Define acute and chronic toxicity
13. What is glaucoma. What are the different types of glaucoma
14. Effects of atropine on eye
15. Mention the uses of anticholinesterases
16. Name the adrenergic receptors
17. Adverse effects and uses of Olanzapine.
18. Uses of moclobemide.
19. Significance of biological clock

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QP Code: 425006 **Reg. No…….**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations February 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. Give a detailed account of chemical and biological evaluation of crude drugs.
2. Discuss the various external factors affecting the cultivation of medicinal plants.

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

3. Discuss about mutation and polyploidy
4. Nutritional requirements of plant tissue culture
5. Classification of Alkaloids
6. Types of plant tissue culture
7. Source, constituents and uses of cotton and jute.
8. What are Hallucinogens and write a note on any one such drug
9. Write note on proteolytic enzymes

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

10. Tisssue culture as source of medicinal compounds
11. Standardization of allergenic extract
12. Serotaxonomical classification of drugs of natural origin
13. Cryopreservation
14. Source, constituents and uses of acacia
15. Definition of Siddha and Ayurveda.
16. Explain on chaulmoogra oil
17. Chemical tests for Gelatin
18. Anticancer drugs of marine source
19. Calibration of eye piece micrometer

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