QP Code: 421006 **Reg. No……**

Fourth Semester B.Pharm Degree Supplementary Examinations
July 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. Summarize the criteria for a compound to be optically active. Illustrate the methods used in resolution of racemic mixture.
2. Discuss the reaction, mechanism and applications of Birch reduction and Claisen-Schmidt rearrangement.

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

3. Short notes on Conformational isomerism of cyclohexane.
4. Explain the Cis Trans and EZ system for the nomenclature of geometrical isomerism.
5. Explain aromaticity, basicity and reactions of pyridine.
6. Give any three methods of preparations of Indole.
7. Explain electrophilic substitution reactions of furan.
8. Write the synthesis of purines. Mention one derivative containing purine and its medicinal use.
9. Discuss about stereoisomerism in biphenyl compounds.

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

10. Any two reactions of pyrrole.
11. Importance of metal hydride reduction.
12. What is D and L nomenclature.
13. What are the different types of asymmetric synthesis.
14. Give the structure of oxazole and thiazole with medicinal uses of any one compound with basic nucleus of each.
15. Define Staggered and eclipsed conformations.
16. What is R and S nomenclature.
17. Define Clemmensen reduction.
18. Any one method of preparation of quinoline.
19. Name any one medicinal compound having basic nucleus of furan, azepine, quinoline and indole.

****

QP Code: 422006 **Reg. No…….**

Fourth Semester B.Pharm Degree Supplementary Examinations
July 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. Write with examples, the importance of ● Partition coefficient ● Hydrogen bonding ● Bioisosterism in relation to biological actions (3+3+4)
2. Define and classify sympathomimetic agents with structural examples. Outline the chemical synthesis and mechanism of action of salbutamol and tolazoline.

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

3. Explain the Structural Activity Relationship (SAR) of parasympathomimetic drugs.
4. Give the synthesis, mechanism of action and uses of procyclidine hydrochloride.
5. Classify sedatives and hypnotics with structural examples.
6. Classify antipsychotic drugs with structural examples.
7. Outline the chemical synthesis and mechanism of action of mefenamic acid.
8. Give a note on narcotic analgesics.
9. Give the structures and uses of
   ● Propranolol ● Haloperidol ● Ethosuximide ● Halothane ● Aspirin

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

10. With examples, explain any one phase II metabolic reactions.
11. List any two important structural requirements for sympathomimetic drugs.
12. What are cholinesterase reactivators.
13. Give a brief note on cholinesterase inhibitors.
14. List two important Structural Activity Relationship (SAR) of barbiturates.
15. Classify anticonvulsants.
16. Outline the chemical synthesis of chlorpromazine.
17. Explain the mechanism of action of inhalational anaesthetics.
18. Enlist the narcotic antagonists along with their structures.
19. Outline the chemical synthesis of ibuprofen.

****

QP Code: 423006 **Reg. No…….**

Fourth Semester B.Pharm Degree Supplementary Examinations
July 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 different non-Newtonian systems with graphs, mechanisms and suitable examples
2. What are different methods of determination of surface tension. Explain any two methods in detail

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

3. DLVO theory
4. Write a note on spreading co-efficient
5. Zeta potential and its applications
6. Discuss the applications of colloidal dispersions
7. Classify surfactants with examples
8. Differentiate flocculated and deflocculated suspensions
9. Explain the evaluation parameters for suspension

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

10. Role of wetting agents
11. What is sedimentation volume
12. Identification tests for emulsion
13. What is Brownian movement
14. What is the influence of temperature on drug degradation
15. Differentiate surface and interfacial tension
16. What is plug flow
17. Name the methods of preparation of colloids
18. Mentions the factors affecting viscosity
19. Differentiate order and molecularity of reaction

****

QP Code: 424006 **Reg. No…….**

Fourth Semester B.Pharm Degree Supplementary Examinations
July 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. Describe protein binding and its significance. Write a note on the factors affecting drug absorption.
2. Classify adrenergic drugs with examples. Describe the pharmacological actions, adverse effects and therapeutic uses of adrenaline.

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

3. Describe enzyme-linked kinase receptors with examples.
4. Differentiate between enteral and parenteral routes of drug administration.
5. Write a short note on the general principles involved in the treatment of poisoning.
6. Write about biological clock and their significance.
7. Write the mechanism of action and adverse effects of lignocaine.
8. Describe briefly neurohumoral transmission.
9. Classify antipsychotics along with their therapeutic uses.

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

10. Define the therapeutic index and its significance.
11. Classify general anaesthetics.
12. Define genotoxicity and teratogenicity.
13. Write about antagonism with examples.
14. Classify opioid analgesics.
15. What is enzyme induction. Write any two examples
16. Define Circadian rhythm and Infradian rhythm.
17. List any four examples of beta blockers.
18. Significance of pharmacovigilance.
19. Classify antimanic drugs.

****

QP Code: 425006 **Reg. No…….**

Fourth Semester B.Pharm Degree Supplementary Examinations
July 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. Discuss the general aspects of cultivation and collection of medicinal plants.
2. Discuss briefly the role of Pharmacognosy in Ayurveda, Siddha, Unani, and Chinese systems of medicine.

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

3. Distinguish between organized and unorganized crude drugs
4. Applications of plant tissue culture in Pharmacognosy
5. Define and classify Volatile oils
6. Discuss about ex situ conservation of medicinal plants
7. What are teratogens, give the source, constituents and uses of Colchicum
8. Cardiovascular agents of marine source
9. Source and uses of Streptokinase and Urokinase

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

10. Write note on dried latex with examples
11. Preparation of Bees wax
12. Define stomatal index and stomatal number
13. Write the biological source constituents and uses of Hemp.
14. Phases of growth in plant tissue culture
15. Differences between primary and secondary metabolites
16. Give the source, constituents and uses of agar
17. Source and uses of an enzyme from animal source
18. Chemical tests for flavonoids
19. Source, constituents and uses of castor oil

****