

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, September 2021

Subject: Pharmacognosy and Phytochemistry-I

Time: 2 Hours

Max. Marks: 75

Note: Answer any seven questions from Part-A, any one questions from Part-B and any five questions from Part-C.

PART - A (7 x 3 = 21 Marks)

- 1 Classify organized drugs giving examples.
- 2 Exemplify influence of attitude in cultivation of medicinal plants.
- 3 Write 'Murexide test' and 'Shinoda test'.
- 4 Write about adulteration of honey and its detection.
- 5 What are auxins? Write their physiological functions.
- 6 Describe Camera Lucida.
- 7 Write about any two plant teratogens.
- 8 Write the source and uses of bromelain and serratiopeptidase.
- 9 Write the therapeutic and industrial uses of gelatin and castor oil.
- 10 Write about any two fibre drugs.

PART - B (1 x 14 = 14 Marks)

- 11 (a) Write in detail the scope and development of pharmacognosy
(b) Write about lycopodium spore method.
- 12 Mention the objectives and write a detailed note on the methods adopted for the conservation of medicinal and aromatic plants.
- 13 Explain methods for induction of polyploidy. Elaborate the influence of polyploidy on the active constituents taking examples.

PART - C (5 x 8 = 40 Marks)

- 14 Write about the nutritional requirements for the growth and maintenance of plant cultures.
- 15 Elaborate on ideal storage conditions for crude drugs.
- 16 Write pharmacognotic note on cotton.
- 17 Enlist methods for classification of crude drugs.
- 18 Write a note on the role of pharmacognosy in allopathic system of medicine.
- 19 Write a detailed note on Resins.
- 20 Write source, chemistry and used of Bees Wax and Acacia.
- 21 Define 'Drug Evaluation'. Write about determination of 'Foreign Organic Matter' and Bitterness value.
- 22 Define 'Acholoids' and 'Tannins'. Write their identification tests.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, September 2021

Subject: Medicinal Chemistry - I

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 Define hydrogen bonding and its effect on biological activity of drugs.
- 2 Mention factors affecting drug metabolism.
- 3 Write the biosynthesis of catecholamines.
- 4 Write the uses of phenytoin and oxazepam.
- 5 Give the synthesis of Carbachol.
- 6 Write a note on cholinergic receptors and their distribution.
- 7 Define antipsychotics. Give two examples.
- 8 Write the uses of Diazepam and phenylephrine.
- 9 Write the uses of Mefenamic acid and Ketorolac.
- 10 Define narcotic antagonists. Give two examples.

PART – B

Note: Answer any one questions.

(1 x 14 = 14 Marks)

- 11 Discuss in detail phase I reactions involved in the drug metabolism.
- 12 Write the pharmacological actions of Adrenaline and discuss the SAR of adrenomimetics.
- 13 Write in detail about the following class of drugs and their applications.
(a) Phenothiazines (b) Benzodiazepines.

PART – C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

- 14 Explain the importance of Bioisosterism in drug design.
- 15 Define sedatives and hypnotics and classify them with examples.
- 16 Write the pharmacological actions of Adrenaline and discuss the SAR of adrenomimetics.
- 17 Give the synthesis and uses of Ketamine hydrochloride and Ibuprofen.
- 18 Write a note on cholinolytics.
- 19 Define sedatives and hypnotics and classify them with suitable examples.
- 20 Write a short note on tranquilizers.
- 21 What are Narcotic agonists and antagonists? Explain their pharmacological action.
- 22 Give the synthesis and uses of Phenytoin and Carbamazepine.

FACULTY OF PHARMACY
B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination,
September 2021

Subject: Pharmacology - I

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 Define prodrug. Give the examples of prodrugs.
- 2 Differentiate enzyme induction and enzyme inhibition.
- 3 Mention the functions of receptors.
- 4 Define synergism. Classify with examples.
- 5 Discuss the differences between general anesthetics and local anesthetics.
- 6 Write a note on co-transmission.
- 7 Describe the stages of general anesthesia.
- 8 Mention the uses of disulfiram.
- 9 Define drug abuse. Give examples.
- 10 Mention the clinical uses of naltrexone.

PART – B

Note: Answer any one questions.

(1 x 14 = 14 Marks)

- 11 Define Receptor. Classify receptors and discuss about signal transduction mechanism of trans membrane enzyme linked receptors.
- 12 (a) Write the pharmacological actions of acetylcholine.
(b) Explain the various therapeutic uses and adverse reactions of parasympatholytics.
- 13 Define Parkinsonism. Classify anti-Parkinson's drugs with examples. Write the mechanism of action and therapeutic uses of peripheral decarboxylase inhibitors.

PART – C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

- 14 Compare the merits and demerits of oral and parenteral routes of administration.
- 15 Differentiate enzyme induction and enzyme inhibition.
- 16 Write a note on various phases of clinical trials.
- 17 Explain about the factors modifying drug action.
- 18 Explain the pharmacological actions of adrenaline.
- 19 Define myasthenia gravis. Enlist the drugs used in its treatment.
- 20 Classify sedative-hypnotics with examples. Explain the mechanism of action, adverse effects and uses of benzodiazepines.
- 21 Explain the pharmacology of hydantoins.
- 22 Discuss the mechanism of action and uses of morphine.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, September 2021

Subject: Pharmaceutical Organic Chemistry - III

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 Define elements of symmetry.
- 2 Draw the conformational isomers of cyclohexane.
- 3 Define and classify heterocyclic compounds with examples.
- 4 Explain the RS system of Nomenclature along with two examples.
- 5 What is optical activity? How we can measure it?
- 6 Give any two applications of LiAlH_4 (Lithium Aluminium Hydride).
- 7 Give any two applications of NaBH_4 .
- 8 Draw the structures of (a) Pyrazole (b) Imidazole.
- 9 Draw the structures of (a) Thiazole (b) Pyrimidine.
- 10 Give the reason for electrophilic substitution at 2nd position in pyrrole.

PART – B

Note: Answer any one questions.

(1 x 14 = 14 Marks)

- 11 Define geometrical isomerism and explain the Cis-Trans/EZ/Syn Anti system of Nomenclature of geometrical isomers with examples.
- 12 Describe the mechanism and applications of following reactions –
(a) Beckmann rearrangement (b) Oppenauer-oxidation.
- 13 Write any two synthesis and three reactions and medicinal uses of (a) Furan (b) Thiophene.

PART – C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

- 14 Explain the DL system of Nomenclature of stereoisom.
- 15 Explain the stereo isomerism in biphenyl compounds and give the condition of optical activity.
- 16 Write the mechanism involved in Wolf-Kishner reduction.
- 17 Compare and contrast the acidity of pyridine and basicity of pyridine.
- 18 Write a note on asymmetric synthesis.
- 19 Write any two synthesis, reactions, medicinal uses of Indole.
- 20 Write any two synthesis, reactions, medicinal uses of Pyridine.
- 21 Give the structure and specific uses of drugs of cone for each category –
(a) Acridine (b) Isoquinoline (c) Quinolines (d) Pyrole (e) Azepines.
- 22 Write the mechanism involved in oppenauer-oxidation.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, September 2021

Subject: Physical Pharmaceutics - II

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 Define and classify colloid dispersions.
- 2 What is Nernst potential?
- 3 Write Stokes law and mention terms in it.
- 4 What are Newtonian systems?
- 5 What is multiple emulsion?
- 6 Define bulk and tapped density.
- 7 What is angle of repose and mention its importance?
- 8 What is pseudo first order reaction?
- 9 What is photolytic degradation?
- 10 List the chemical factors effect drug degradation.

PART – B

Note: Answer any one questions.

(1 x 14 = 14 Marks)

- 11 Explain different viscometers along with their benefits and limitations in determination of viscosity.
- 12 Explain formulation methods for flocculated and deflocculated suspensions.
- 13 Explain the procedures of accelerated stability testing in determination of shelf life.

PART – C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

- 14 Describe the method preparation of association colloid.
- 15 Write the optical properties of colloid.
- 16 Explain the effect of electrolytes on colloid dispersions.
- 17 Explain different signs of physical instability of emulsions.
- 18 Describe the significance of Heckel equation.
- 19 Describe the emulsion formulation by HLB method.
- 20 Explain various flow properties of powder.
- 21 Write zero order reaction kinetics and its equations.
- 22 Write the stabilization of medicinal agents oxidation.

FACULTY OF PHARMACY

**B. Pharmacy IV – Semester (PCI) (Main & Backlog) Examination,
November 2022**

Subject: Medicinal Chemistry - I

Time: 3 Hours

Max.Marks:75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What is partition coefficient? Write its significance.
2. Ortho salicy acid is more active than para hydroxyl benzoic acid. Why?
3. Classify adrenergic receptors and write their distribution
4. Give the structures and uses of Labetalol & Phentolamine.
5. Give the synthesis of Neostigmine.
6. Outline the biosynthesis of Acetyl choline
7. Define anticonvulsants? Give two examples
8. Write the structure and MOA of Diazepam.
9. Give the synthesis of Fentanyl citrate.
10. Define narcotic antagonists? Give two examples.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Explain how the following physicochemical properties influence the biological action of a drug molecule.
(1) Ionization (2) Chelation (3) Protein binding (4) Solubility
12. Define, classify cholinergic agonists with examples and discuss the mode of action of acetyl cholinesterase inhibitors.
13. Define NSAIDs with minimum two structural examples in each class and write MOA. Uses & SAR of morphine analogues.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35Marks)

14. Discuss conjugation reactions.
15. Explain the role of cytochrome 450 enzyme in drug Metabolism
16. Write a note on Solanaceous alkaloids
17. Write a note on Neuromuscular blocking agents.
18. Write the classification & SAR of sympathomimetic agents.
19. Give the structures. MOA and uses of Propranolol. Clonidine.
20. Write the structures and uses of a) Benztropine mesylate b) Triclofos Sodium
21. Classify antipsychotics with examples.
22. Define and classify sedatives and hypnotics with examples.

FACULTY OF PHARMACY
B. Pharmacy (PCI) IV – Semester (Main & Backlog) Examination,
November 2022
Subject: Pharmacognosy & Phytochemistry – I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write advantages of tissue culture over other cultivation techniques.
2. Describe micrometers and write its application in identification of drugs.
3. Explain any two methods to improve soil fertility.
4. Classify auxins giving examples. Write the applications.
5. Explain surface sterilization of explants.
6. Write the role of pharmacognosy in allopathy.
7. Differentiate volatile oils from fixed oils.
8. Exemplify plant hallucinogens. Write about Indian hemp.
9. Write about any two animal derived crude drugs.
10. Write identification tests for tannins.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. (a) Write the advantages & disadvantages of cultivation of medicinal plants.
(b) Write application of mutation in development of new plant breeds.
12. Write pharmacognosy of Agar.
13. Write about common practices involved in collection and processing of crude, drugs.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Define Drug evaluation. Enlist methods adopted and give an account of chemical evaluation.
15. Write note on Alkaloids.
16. Write about practices adopted for conservation of medicinal plants.
17. Write a pharmacognostic note of Bees wax.
18. Discuss marine toxins.
19. Write the source, chemical constituents and uses of cotton castor oil.
20. Discuss chemical classification of crude drugs giving examples.
21. Write a note on edible vaccines.
22. Write application of PTC (Plant Tissue Culture).

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FACULTY OF PHARMACY

B. Pharmacy IV - Semester (PCI) (Main & Backlog) Examination, November 2022

Subject: Pharmacology-I

Time: 3 Hours

Max. Marks: 75

PART- A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define prodrug, give the examples of prodrugs.
2. Differentiate enzyme induction and enzyme inhibition
3. Mention the functions of receptors
4. Define synergism. Classify with examples
5. Discuss the differences between general anesthetics and local anesthetics
6. Write a note on co-transmission
7. Describe the stages of general anesthesia
8. Mention the uses of disulfiram
9. Define drug abuse. Give examples
10. Mention the clinical uses of naltrexone.

PART- B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Define Receptor. Classify receptors and discuss about signal transduction mechanism of transmembrane enzyme linked receptors.
12. a) Write the pharmacological actions of acetylcholine
b) Explain the various therapeutic uses and adverse reactions of parasympatholytics.
13. Define Parkinsonism. Classify anti-Parkinson's drugs with examples. Write the mechanism of action and therapeutic uses of peripheral decarboxylase inhibitors.

PART- C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Compare the merits and demerits of oral and parenteral routes of administration.
15. Differentiate enzyme induction and enzyme inhibition
16. Write a note on various phases of clinical trials
17. Explain about the factors modifying drug action
18. Explain the pharmacological actions of adrenaline
19. Define myasthenia gravis. Enlist the drugs used in its treatment
20. Classify sedative-hypnotics with examples. Explain the mechanism of action, adverse effects and uses of benzodiazepines.
21. Explain the pharmacology of hydantions.
22. Discuss the mechanism of action and uses of morphine.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, November 2022
Subject: Pharmaceutical Organic Chemistry-III

Time: 3 Hours

Max. Marks: 75

PART-A (20 Marks)

Note: Answer all the questions:

1. Define the terms optical activity and Meso compound.
2. Define and classify heterocyclic compounds with examples.
3. Explain the RS system of Nomenclature with two examples.
4. Write the structure and uses of two drugs with furan ring.
5. Discuss any two synthetic methods of thiazole.
6. Mention any two reactions of quinolone.
7. Explain why pyridine is more basic than pyrrole?
8. Give any two medicinally important compounds and uses of Pyrimidine and isoquinoline.
9. Give any two applications of NaBH_4
10. Write any two reactions of pyrazole.

PART-B (20 Marks)

Note: Answer any two questions:

11. (a) Define geometrical isomerism and explain Cis-Trans/EZ Nomenclature of geometrical isomers with examples.
(b) Discuss different conformations of cyclohexane.
 12. Write any two synthetic methods, three reactions and medicinal uses of 9
(a) Pyrrole
(b) Thiophene.
- (OR)**
13. Describe the mechanism and applications of following reactions
(a) Birch reduction
(b) Oppenauer-oxidation.

PART-C (35 Marks)

Note: Answer any seven questions:

14. Write about different conformations of ethane.
15. Define racemic modification. Explain the various methods of resolution of racemic mixture.
16. Mention the applications of Lithium Aluminium Hydride.
17. Describe the mechanism of Beckmann rearrangement and mention its applications?
- 18(a) Mention any two methods of synthesis of imidazole (b) Give any two reactions of oxazole.
19. Discuss the mechanism and applications of Wolfkisher reduction.
20. Explain Fischer indole synthesis.
21. Write a note on Atropisomerism.
22. Give the structures and uses of the following (i) Acridine (ii) purine (iii) thiazole (i) Pyridine.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, November 2022
Subject: Physical Pharmaceutics - II

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

- 1 Define and classify coarse dispersions.
- 2 What is Zeta potential?
- 3 What are non-Newtonian systems?
- 4 What is microemulsion?
- 5 Mention factors influencing viscosity.
- 6 Define porosity.
- 7 Define sedimentation volume and what is its importance.
- 8 What is pseudo zero order reaction?
- 9 How to prevent photolytic degradation?
- 10 List the physical factors causing drug degradations.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 11 Explain theories of emulsification. Describe preservation of emulsions.
- 12 Explain different methods for determining surface area of powders.
- 13 Describe the procedure for determination of expiry date.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

- 14 Write various methods for preparation of colloids.
- 15 Differentiate lyophilic and lyophobic colloid dispersions.
- 16 Compare and contrast flocculated and deflocculated suspensions.
- 17 Explain the interfacial properties of suspensions.
- 18 What is thixotropy and mention its importance in pharmacy.
- 19 Write different derived properties of powders.
- 20 Describe the procedure for determination of particle size and its distribution.
- 21 Write first order reaction kinetics and its equations.
- 22 Write the stabilization of medicinal agents against hydrolysis.

FACULTY OF PHARMACY
B. Pharmacy IV Semester (PCI) (Backlog) Examination, March 2022

Subject: Medicinal Chemistry - I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all questions.

(10 x 2 = 20 Marks)

- 1 What is partition coefficient?
- 2 What is chelation?
- 3 What are the uses of barbiturates?
- 4 Write the uses of Diazepam and Phenytoin.
- 5 Give the synthesis of Propranolol.
- 6 Write a note on adrenergic receptors and their distribution.
- 7 Define anticonvulsants. Give two examples.
- 8 Write the uses of Neostigmine and physostigmine.
- 9 Give the uses of Diclofenac and Thiopental.
- 10 Define cholinolytics. Give two examples.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 11 Explain how the following physicochemical properties influence the biological action of a drug molecule.
(a) Partition coefficient (b) Chelation
(c) Hydrogen bonding (d) Solubility.
- 12 Define, classify and write the SAR of parasympathomimetic agents.
- 13 Define NSAIDs with minimum two structural examples in each class and write in detail about narcotic antagonists.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

- 14 Write about protein binding of drugs its advantages and disadvantages.
- 15 Explain the role of cytochrome 450 enzyme in drug Metabolism.
- 16 Explain the S.A.R. of β -adrenergic blocking agents.
- 17 Write a note on Neuromuscular blocking agents.
- 18 Write about Acetylcholine esterase inhibitors.
- 19 Give the structures of solanaceous alkaloids and discuss their pharmacological actions.
- 20 Classify anticonvulsants and write the SAR of barbiturates.
- 21 Write the SAR of morphine analogues.
- 22 Give the synthesis and MOA of Phenytoin and Dicyclomine hydrochloride.

FACULTY OF PHARMACY

B. Pharmacy IV - Semester (PCI) (Backlog) Examination, March 2022

Subject: Physical Pharmaceutics-II

Time: 3 Hours

Max. Marks: 75

**Note: Answer all Questions Part - A, any two questions from Part – B,
and any seven questions from Part – C**

PART - A (10 X 2 =20 Marks)

1. Define and classify coarse dispersions
2. What is zeta potential
3. What are non-Newtonian systems
4. What is micro emulsion
5. Mention factors influencing viscosity
6. Define porosity
7. Define sedimentation volume and what is its importance
8. What is pseudo zero order reaction
9. How to prevent photolytic degradation
10. List the physical factors effect drug degradations.

PART - B (2 X 10 = 20 Marks)

11. Explain theories of emulsification. Describe preservation of emulsions.
12. Explain different methods determining surface area of powders.
13. Describe the procedure for determination of expiry date.

PART - C (7 X 5 = 35 Marks)

14. Write various methods for preparation of colloids.
15. Differentiate lyophilic and lyophobic colloid dispersions
16. Compare and contrast flocculated and deflocculated suspensions.
17. Explain the interfacial properties of suspensions.
18. What is thixotropy and mention its importance in pharmacy
19. Write different derived properties of powders
20. Describe the procedure for determination of particle size and its distribution
21. Write first order reaction kinetics and its equations
22. Write the stabilization of medicinal agents against hydrolysis.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Backlog) Examination, March 2022

Subject: Pharmacognosy & Phytochemistry - I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all questions.

(10 x 2 = 20 Marks)

- 1 Exemplify Alphabetical and pharmacological methods for classification of crude drugs.
- 2 What are 'bio fertilizers'? Write about any two.
- 3 Classify unorganized drugs giving examples.
- 4 Define various Leaf constants.
- 5 Enlist phytohormones. Write about the role of abscisic acid in plant growth.
- 6 Write about surface sterilization in tissue culture.
- 7 Define 'glycosides'. Classify giving examples.
- 8 Write the source and uses of Honey and chaulmoogra oil.
- 9 Write about any two plant fibre drugs.
- 10 Write about Wool fat and Acacia.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 11 What are the various methods for cultivation of medicinal plants? Write their merits and demerits.
- 12 (a) Write a note on edible vaccines.
(b) Write about hairy root culture.
- 13 (a) Write the role of pharmacognosy on Homeopathic system of medicine.
(b) Write sources, uses and industrial applications of proteolytic enzymes.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

- 14 Classify marine drugs. Write about any three novel marine derived drugs.
- 15 Write in detail various applications of plant tissue culture.
- 16 What are the various sources for crude drugs? Elaborate on how tissue culture serves to a source.
- 17 What is adulteration? Write about various common practices adopted in commerce for adulteration of crude drugs.
- 18 Write a note on the influence of the following factors in collection of drugs.
(i) Rain fall (ii) Humidity (iii) Light.
- 19 Write a note on artificial mutations.
- 20 What is physical method of Drug Evaluation? Write about Ash values and Extractive values.
- 21 Define Volatile oils and Tannins. Classify them giving examples.
- 22 Write pharmacognostic note on Tragacanth.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Backlog) Examination, March 2022

Subject: Pharmacology - I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all questions.

(10 x 2 = 20 Marks)

- 1 Discuss the concept of first pass metabolism with examples.
- 2 Define Bioavailability. Why the bioavailability of drug s is lower after oral administration.
- 3 What is dose response relationship? What are its advantages?
- 4 Define plasma half life. Mention its significance.
- 5 What is vasomotor reversal of Dale?
- 6 Enlist the drugs used in glaucoma.
- 7 Mention the uses of pre-anesthetic medication.
- 8 Name excitatory neurotransmitters present in CNS.
- 9 What is drug addiction? Give examples.
- 10 Mention the therapeutic uses and adverse reactions of benzodiazepines.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 11 (a) Write the pharmacological actions of adrenaline.
(b) Explain the various therapeutic uses and adverse reactions of β -adrenergic blockers.
- 12 Classify antiepileptic drugs. Explain the mechanism of action, adverse effects and uses of hydantoins and aliphatic carboxylic acids.
- 13 What is Alzheimer's disease? Classify drugs used in Alzheimer's disease and explain the mechanism of action, adverse effects and therapeutic uses of cholinergic activators.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

- 14 Explain in detail about phase-I biotransformation of drugs with examples.
- 15 Describe the three major effector pathways through which G-protein coupled receptors function.
- 16 Discuss about pharmacokinetic drug interactions with suitable examples.
- 17 Classify neuromuscular blockers with examples. Write the mechanism of action, adverse effects and therapeutic uses of curare alkaloids.
- 18 Mention the mechanism of action and uses of local anesthetic agents.
- 19 Write the pharmacological actions of alcohol.
- 20 Write about the mechanism and stages of general anesthesia.
- 21 Classify antiparkinson's drugs with examples. Write the mechanism of action and adverse effects of dopamine precursor.
- 22 Discuss in detail the pharmacological actions of morphine.

FACULTY OF PHARMACY

B. Pharmacy IV - Semester (PCI) (Main & Backlog) Examination, October 2023

Subject: Medicinal Chemistry – I

Time: 3 Hours

Max. Marks: 75

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define bioisosterism and classify bioisosterism.
2. Define geometrical isomerism and give examples.
3. Write the biosynthesis of catecholamines.
4. Give the structures and uses of Prazocin and Atenolol.
5. Outline the synthesis of Salbutamol.
6. Classify cholinergic receptors and write their distribution
7. Write about cholinesterase reactivator.
8. Define antipsychotics and write examples.
9. Give the structures and uses any two analogues of Barbiturates.
10. Classify general anaesthetics and write examples.

PART-B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. What is drug metabolism? Discuss in detail phase I reactions involved in the drug metabolism.
12. (a) Write in detail about parasympathomimetics
(b) Classify sedatives and hypnotics and write the SAR of Benzodiazepines.
13. (a) Write the synthesis and uses of Ketamine hydrochloride & Methadone Hydrochloride
(b) Write the SAR of morphine analogues.

PART-C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Explain the factors affecting drug metabolism including stereo chemical aspects.
15. Define and give the significance of ionization & partition coefficient.
16. Explain the SAR of beta adrenergic blocking agents.
17. Classify cholinolytic agents with examples.
18. Write the synthesis and uses of Dicyclomine and Ipratropium bromide.
19. Write the synthesis and MOA of Ibuprofen & Halothane.
20. Classify antipsychotics and write SAR of Phenothiazines.
21. What are Narcotic agonists and antagonists? Explain their pharmacological action.
22. Give the synthesis and uses of Phenytoin and Chlorpromazine.

FACULTY OF PHARMACY

B. Pharmacy IV-Semester (PCI) (Main & Backlog) Examination, October 2023
Subject: Pharmacognosy and Phytochemistry-I

Time: 3 Hours

Max.Marks:75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write taxonomical classification of any one drug.
2. Define and classify volatile oils with examples.
3. Describe camera Lucida. Write its applications.
4. What are plant growth inhibitors? Write their physiological effects.
5. Write the basic concept of homeopathy.
6. Write source, and uses of honey and silk.
7. Write an outline on loss on drying.
8. Write about Dragendorff's test and kellerkilliani test
9. What is a latex? Write source, active constituents and use of any latex drug.
10. Write condition for storage of moisture sensitive drugs.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. What are the unique features of lycopodium spores? Write in detail evaluation of crude drugs by lycopodium method giving examples.
12. Write about (i) Factors affecting collection of crude drugs.
(ii) Biological evaluation
13. Write applications of plant tissue culture.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write a note on marine drugs.
15. Elaborate the role of pharmacognosy in traditional medicine.
16. Write a note on conservation of medicinal plants.
17. What is hybridization? Write its significance with respect to medicinal plants giving examples.
18. Write pharmacognosy of cotton.
19. Write a note on plant derived hallucinogens.
20. Write a note on proteolytic enzymes.
21. Write about edible vaccines.
22. Write about plant hormones their applications.

FACULTY OF PHARMACY

B. Pharmacy IV Semester (PCI) (Main & Backlog) Examination, October 2023

Subject: Pharmacology - I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 marks)

1. Define prodrug. Give the examples of prodrugs.
2. Define Bioavailability. Why the bioavailability of drugs is lower after oral administration.
3. Define plasma half life. Mention its significance.
4. What is vasomotor reversal of Dale?
5. Enlist the drugs used in glaucoma.
6. What is dose response relationship? What are its advantages?
7. Mention the uses of pre-anesthetic medication.
8. Name excitatory neurotransmitters present in CNS.
9. Mention the therapeutic uses and adverse reactions of benzodiazepines.
10. What is drug addiction? Give examples.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Define Parkinsonism. Classify anti-Parkinson's drugs with examples. Write the mechanism of action and therapeutic uses of peripheral decarboxylase inhibitors.
12. (a) Write the pharmacological actions of acetylcholine.
(b) Explain the various therapeutic uses and adverse reactions of parasympatholytics.
13. Classify antiepileptic drugs. Explain the mechanism of action, adverse effects and uses of hydantoin and aliphatic carboxylic acids.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Describe the three major effector pathways through which G-protein coupled receptors function.
15. Discuss about pharmacokinetic drug interactions with suitable examples.
16. Explain in detail about phase-I biotransformation of drugs with examples.
17. Classify neuromuscular blockers with examples. Write the mechanism of action, adverse effects and therapeutic uses of curare alkaloids.
18. Mention the mechanism of action and uses of local anesthetic agents.
19. Write the pharmacological actions of alcohol.
20. Classify anti-Parkinson's drugs with examples. Write the mechanism of action and adverse effects of dopamine precursor.
21. Discuss in detail the pharmacological actions of morphine.
22. Write about the mechanism and stages of general anesthesia.

FACULTY OF PHARMACY

B.Pharmacy IV Semester (PCI) (Main & Backlog) Examination, October 2023

Subject: Pharmaceutical Organic Chemistry - III

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 marks)

1. What are diastereomers? Give an example.
2. Discuss elements of symmetry with examples.
3. Define optical activity and meso compound.
4. Discuss any two synthetic methods of pyrrole.
5. Write any two reactions of Oxazole.
6. Explain why pyridine is more basic than pyrrole?
7. Give any two medicinally important compounds and uses of pyrimidine and isoquinoline.
8. Mention any two applications of Birch reduction.
9. Write any two reactions of thiophene.
10. Explain geometrical isomerism with examples.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. (a) Explain the sequence rules for R and S system of nomenclature of optical isomers.
(b) Give a brief account on Asymmetric synthesis.
12. Write any two synthetic methods, three reactions and medicinal uses of
(a) Furan (b) thiazole.
13. Describe the mechanism and applications of following reactions
(a) Beckmann rearrangement (b) Claisen-schmidt condensation.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Define racemic mixture. Explain the various methods of resolution of racemic mixture.
15. Write about different conformations of cyclohexane.
16. Mention the applications of Lithium Aluminium Hydride.
17. Describe the mechanism of clemmenson reduction and mention its applications?
18. Explain fischer indole synthesis.
19. Discuss the mechanism and applications of Sodium borohydride.
20. Explain Skraups synthesis of Quinoline.
21. Explain stereospecific or stereoselective reactions with examples
22. Give the structures and specific uses of drugs containing (i) pyridine (ii) purine.

FACULTY OF PHARMACY
B. Pharmacy IV-Semester (PCI) (Main & Backlog) Examination, October 2023
Subject: Physical Pharmaceutics-II

Time: 3 Hours

Max. Marks: 75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 marks)

1. Mention the size range and draw the shapes of colloidal particles.
2. What is Gold number? Write its importance.
3. What is peptization and mention its applications.
4. Define specific viscosity and relative viscosity.
5. What is deflocculated suspension?
6. Classify multiple emulsions and mention their applications.
7. What is degree of flocculation and mention its use.
8. What is plastic and elastic deformation?
9. Define angle of repose and mention its significance.
10. What is photolysis and how to prevent it?

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Explain the kinetic and optical properties of colloids.
12. Describe the theories of emulsification and stability of emulsions.
13. Explain different methods of determining particle size.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. What are non-newtonian systems and explain the concept of thixotropy with its importance.
15. Explain DLVO theory and write its significance.
16. Write the interfacial properties and settling in suspension and their influence on stability.
17. Write the methods to determine the order of reaction kinetics.
18. Write the construction and working of capillary viscometers.
19. Explain the formulation of flocculated and deflocculated suspensions.
20. Describe drug stabilization from hydrolysis and oxidation.
21. Explain the equations applicable to first order reactions.
22. The initial drug dose is 400 mg. Its concentration is reduced to 380 mg in 18 months. Calculate the zero order constant, half life and shelf life in years.
