Code No. D8170/PCI

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 absicic 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 proteolysis 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 those giving examples.
22 Write pharmacognostic note on Tragacenth.

Code No. D-8167/ PCI

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 Acetylcholone 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.

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Code No. D-8167/A/PCI

FACULTY OF PHARMACY

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

Subject: Pharmaceutical Organic Chemistry - III

Time: 3 Hours **Max. Marks: 75**

PART – A

Note: Answer all questions. **(10 x 2 = 20 Marks)**

1 Differentiate enantiomers and diastereomers with examples.
2 Draw the conformational isomers of ethane and n-butane.
3 Define Atropisomerism of biphenyl compounds with examples.
4 Define and classify Heterocyclic compounds.
5 Explain the basicity of pyridine.
6 Give any two applications of clemmensen reduction.
7 Define Birch and Wolffkishner reduction.
8 Define the following terms: (a) Meso compounds (b) Specific rotation.
9 Draw the structures of (i) Acridine (ii) Indole.
10 Draw the structures of (i) Quinoline (ii) Isoquinoline.

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 What are the sequence rules and explain the RS system of Nomenclature of optical isomers?
12 Write the mechanism and applications of metal hydride reductions
(a) $NaBH_4$ (Sodium borohydride) (b) $LiAlH_4$ (Lithium Aluminium hydride)
13 Write any two synthesis and three reactions and medicinal uses of
(a) Imidazole (b) Thiazole.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Define elements of symmetry with examples.
15 Discuss any 3 methods of resolution of racemic modification.
16 Write the significance of stereo specific and stereoselectic reactions with examples.
17 Write about synthesis, reactions and medical uses of Furan.
18 Write about reactions of pyridine.
19 Mention applications of oppenauer-oxidation and Dakin reaction.
20 Write a note on geometrical isomers and nomenclature of geometrical isomers.
21 Give the structure and specific uses of drugs of (one for each category)
(a) Azepines (b) Thiophene (c) Pyrazole (d) Purines (e) Pyrimidines.
22 Explain the relative aromaticity and reactivity f pyrole, furan and thiophene.

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Code No. D-8180/PCI

FACULTY OF PHARMACY

B. Pharmacy VI Semester (PCI) (Backlog) Examination, February / March

2022 Subject: Pharmaceutical Biotechnology

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all questions: **(10 x 2 = 20 Marks)**

1. What are mutants? Types of mutants.
2. Define Immobilization. What are the types of immobilization?
3. Write the differences between Exonucleases and Endonucleases.
4. What are vectors? Write the ideal properties of vectors.
5. Write few applications of hybridoma technology.
6. What are toxins? Explain the method of conversion of toxin to toxoid.
7. Write the preparation and uses of human fibrinogen.
8. Write about types of aerators in Fermentor.
9. What is protein engineering?
10. Differentiate between prokaryotic and Eukaryotic organisms.

PART - B

Note: Answer any two questions: **(2 x 10 = 20 Marks)**

11. Write differences between HLA and MHC. Discuss the structure and function of MHC.
12. Explain the typical structure of Immunoglobulin with neat labeled diagram and types and functions of Antibodies.
13. What are plasma substitutes? Explain the manufacturing of plasma substitutes and standardization.

PART - C

Note: Answer any seven questions: **(7 x 5 = 35 Marks)**

14. Write a brief notes on Protein Engineering.
15. Explain the working process of polymerase chain reaction.
16. Explain pBR322 and pUC vectors.
17. Discuss the general methods of preparation of vaccines.
18. Explain southern blotting technique.
19. Explain in detail direct and indirect methods of ELISA.
20. What are mutations? Explain the types of mutations.
21. Explain the preparation of dried human plasma and dries human serum.
22. Explain type I and type II hypersensitivity reactions.

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Code No. D-8169/ PCI

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.

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Code No. 12361/ PCI

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 2 nd position in pyrrole.

PART – B

Note: Answer any one question. (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 assymetric synthesis.
19 Write any two syntheses, 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.

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Code No. 12362/PCI

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 question. **(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.

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Code No. 12363/PCI

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 question. **(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.

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Code No. 12364/ PCI

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 question. **(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.

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Code No. 12365/PCI

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 question 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.

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Code: 12070/PCI

FACULTY OF PHARMACY

B. Pharmacy IV – Semester (PCI) (Backlog) Examination, March 2021

Subject: Physical Pharmaceutics - II

Time : 2 Hours **Max. Marks: 75**

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

PART – A (7x3=21 Marks)

1. What is HLB? What are its applications?
2. What is Tyndall effect?
3. Define surface tension. Mention its applications.
4. Define viscosity. Mention its applications.
5. Write stokes equation for sedimentation of particles.
6. What is Hooke's law? Give idea about plastic and elastic deformation.
7. Write the applications of micro emulsions.
8. What is bulk density? Mention its applications.
9. What is first order reaction? Give some examples of first order reaction.
10. What is photo degradation? How it can be prevented?

PART – B (1 x 14 = 14)

11. Explain about methods for determination of viscosity.
12. Explain about formulation of flocculated and deflocculated suspensions.
13. Discuss about methods for determining order of reaction.

PART - C (5 x 8 = 40)

14. Explain about association of colloids.
15. Explain about plastic flow of liquids and give idea about plastic viscosity.
16. Write about theories of emulsification.
17. Mention the measures to prevent hydrolysis.
18. Write the principle as well as method for determination of surface tension.
19. State Fick's first law of diffusion and its role in colloids.
20. Write about hydrolytic degradation and its prevention.
21. Write the limitations of accelerated stability testing.
22. Explain about preservation of emulsion.

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Code No. 12069/PCI

FACULTY OF PHARMACY

B. Pharmacy IV-Semester (PCI) (Backlog) Examination, March 2021

Subject: Medicinal Chemistry - I

Time : 2 Hours **Max. Marks: 75**

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

PART – A (7x3=21 Marks)

1. Write the uses of cholinesterase inhibitors with two drug examples.
2. Write the structure and uses of Phenytoin.
3. Define geometrical isomerism with examples.
4. Write the structure and uses of any two anti inflammatory drugs.
5. Mention the uses of adrenergic receptors blockers with two drug examples.
6. Explain the effect of solubility in relation to biological action of drug.
7. Write any two uses of Cholinersicegic blocking agents with examples.
8. Write the advantages of selective Cox-2 inhibitors.
9. Define and classify anticonvulsant drugs with suitable example.
10. Define sedative and heypnotic with examples.

PART – B (1 x 14 = 14)

11. What is drug metabolism? Write the factors influencing drug metabolism including sterochemical aspects.
12. Write the mechanism of action, uses and SAR of morphine analogues. Outline the synthesis of (a) Meperidine Hcl (pethidine) (b) Fentanyl citrate.
13. Write the classification, mechanism of action, SAR and uses of parasympathomimtic agents, atleast 2 structures for each class.

PART - C (5 x 8 = 40)

14. Write the importance of Bio-isoterism in drug design.
15. Write a note on ganglionic blocking agents.
16. Write the SAR of β-adrenergic blockers. Outline the synthesis mechanism of action and uses of propranolol.
17. Write a note on narcotic antagonists. Write the structures and uses of (a) Naloxone Hcl, (b) Nalorphine Hcl.
18. Define anti inflammatory agents. Write the classification, mechanism of action and uses of NSAIDS, atleast 2 structures for each class.
19. Outline the synthesis, mechanism of action and uses of (a) Halothane (b) Ketamine Hcl.
20. Explain indetail about SAR of Barbiturates.
21. Define and classify cholinergic blocking agents. Explain the SAR of tropane alkaloids.
22. Write the synthesis of Ibuprofen.

Code: 12068/PCI

FACULTY OF PHARMACY

B. Pharmacy IV - Semester (PCI) (Backlog) Examination, March 2021

Subject: Pharmaceutical Organic Chemistry - III

Time: 2 Hours **Max. Marks: 75**

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

PART – A (7x3=21 Marks)

1. Describe the terms plane polarized light and meso compound.
2. Write any one method of synthesis of Oxazole.
3. Mention any two reactions of Pyrazole.
4. Define geometrical isomerism with examples.
5. Give two applications of Lithium Aluminium Hydride.
6. Write the structures and medicinal use SOF Isoxazole and thiazole.
7. Write any two reactions of acridine.
8. Discuss the conformations of ethane.
9. Write the names of any two compounds containing inidazole and oxazole.
10. Define elements of symmetry.

PART – B (1x14=14 Marks)

11. (a) Explain sequence rules to determine R and S configuration.
    (b) Write the conformational isomerism in Butane.
12. Outline any two methods of preparation and three reactions of Pyrrole and Furan.
13. Describe the mechanism of following reactions
    (i) Beckmann rearrangement (ii) Oppenauer oxidation.

PART - C (5x8=40 Marks)

14. Discuss two applications of Claisen Schmidt condensation.
15. Discuss any two methods of resolution of racemic modification.
16. Outline the method of preparation of Quinoline and Isoquinoline.
17. Write any three reactions and uses of thiophene.
18. Write a note on basicity of Pyridine.
19. Give the structures and specific uses of drugs containng (i) pyrimidine (ii) purine.
20. Explain stereo specific and stereoselective reactions with examples.
21. Explain Fischer Indole synthesis.
22. Give a brief account on Asymmetric synthesis.

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Code No: 12072/PCI

FACULTY OF PHARMACY

B. Pharmacy IV- Semester (PCI) (Backlog) Examination, March 2021

Subject: Pharmacognosy & Phytochemistry - I

Time: 2 Hours **Max. Marks: 75**

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

PART–A(7X3=21)

1. Differentiate organized and unorganized drugs.
2. What are organoleptic evacuations? Give examples.
3. What are uses of plant hormones? Give examples.
4. How do you test the germinating ability of seeds?
5. Write the uses of Flavonoids.
6. Write tests to differentiate cotton, jute.
7. Explain enfleurage.
8. Write source and uses of bromolein.
9. Write industrial applications of castor oil.
10. Write principles of ayurvedic system of medicine.

PART – B (1 x 14 = 14)

11. Discuss the development of pharmacognosy giving the historical background. What is the scope of pharmacognosy in providing new drugs?
12. Discuss the advantages and disadvantages of obtaining the crude drugs from cultivated and wild plants.
13. Write in detail applications of plant tissue culture.

PART - C (5 x 8 = 40)

14. Explain the principles of Homeopathy.
15. Write a note on Lycopodium Spore method.
16. Elaborate the applications of plant growth hormones in the cultivation of medicinal plants.
17. Write biological source, active constituents and uses of (i) Honey (ii) Chaulmoogra Oil.
18. Write about Edible vaccines.
19. How do waxes differ from fats? Write a pharmacognostic note on Bees wax.
20. Write the definition, properties and identification tests for Tannins.
21. Discuss different types of cultures in Plant Tissue Culture.
22. Write a note on marine biologicals as a source for novel drugs.

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Code: 12071/PCI

FACULTY OF PHARMACY

B. Pharmacy IV - Sem. (PCI) (Backlog) Examination, March 2021

Subject: Pharmacology - I

Time : 2 Hours **Max. Marks: 75**

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

PART – A (7x3=21 Marks)

1. Define bioavailability and volume of distribution.
2. What is biological half life and its importance.
3. Define tolerance and tachyphylaxis.
4. Classify neurotransmitters with examples.
5. Define (i) Sedative (ii) Hypnotic.
6. Write the examples of beta blockers with intrinsic sympathomimetic activity.
7. Write any two differences between $GABA_A$ and $GABA_B$ receptors with examples.
8. Differentiate typical and a typical antipsychotics.
9. Define therapeutic index. Write the examples of narrow therapeutic index drugs.
10. Write any two examples of CYP enzyme inducers and inhibitors.

PART – B (1 x 14 = 14)

11. Define Receptor. Classify receptors and explain about G-Protein coupled receptors with signaling transduction mechanisms.
12. Write the pharmacology of
    (a) Diazepam (b) Morphine (c) Propranolol
13. Classify sympathomimetic drugs with examples. Explain the pharmacology of adrenaline.

PART - C (5 x 8 = 40)

14. Write a note on phase -I biotransformation reactions with examples.
15. Discuss about pharmacokinetic drug interactions with suitable examples.
16. Explain about the mechanism of action, adverse effects and uses of
    (a) Local anaesthetics.
    (b) Curare alkaloids.
17. Explain the mechanism of action, adverse effect and uses of
    (a) Beta blockers.
    (b) Anticholinesterases.
18. Classify antidepressants with examples. Write the mechanism action and adverse effects of tricycle antidepressants.
19. Write about mechanism and stages of general anesthesia.
20. Explain about cholinergic transmission.
21. Classify sedative-Hypnotics with examples. Explain mechanism of action, adverse effects and uses of barbiturates.
22. Write a note on various phases of clinical trials.