

FACULTY OF PHARMACY

**B. Pharmacy II - Semester (PCI) (Backlog) Examination, March 2022 Subject:
Environmental Sciences**

Time: 2 Hours

Max. Marks: 50

**Note: Answer any two questions from Part-A any six questions Part-B PART- A
(2 x 10 = 20 Marks)**

1. Explain the concept of ecosystem. Give the structure and functions of ecosystem. Briefly explain any two ecosystems.
2. What are the causes of air pollution? How can we reduce air pollution?
3. Explain the different natural resources. What is the role of an individual in the conservation of natural resources?

PART- B (6 x 5 = 30 Marks)

4. Explain the causes of water pollution?
5. What are the different mineral resources? List the environmental problems of some minerals.
6. Explain the structure and functions of forest ecosystem.
7. Briefly explain the forest resources.
8. Explain the various renewable resources
9. Classify the aquatic ecosystem and briefly explain each one.
10. Explain food chain and food web with examples.
11. What are the different resources of water?

FACULTY OF PHARMACY
B. Pharmacy II Semester (PCI) (Backlog) Examination,

March 2022

Subject: Computer Application in Pharmacy

Time: 2 Hours

Max. Marks: 50

PART - A

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 1 Define number system. Explain the conversion process from binary to decimal and hexadecimal to binary.
- 2 (a) Explain any 5 HTML tags with examples.
(b) Explain the need of hospital and clinical pharmacy.
- 3 (a) What is bioinformatics? Explain its applications.
(b) Write note on CDS (Chromatographic data systems).

PART - B

Note: Answer any six questions.

(6 x 5 = 30 Marks)

- 4 Explain the concept of One's complement and Two's complements.
- 5 Write about syntax rules for Extensible Mark-up Language declaration.
- 6 Write a note on web server and server products.
- 7 Explain the application of computers in Pharmacy.
- 8 Write about Objective of Bioinformatics.
- 9 Explain the importance of TIMS (Text Information Management Systems).
- 10 Explain the importance of Data flow diagram.
- 11 Explain the process of Medication monitoring.

FACULTY OF PHARMACY
B. Pharmacy II Semester (PCI) (Backlog) Examination,

March 2022

Subject: Pharmaceutical Organic Chemistry - I

Time: 3 Hours

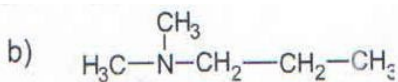
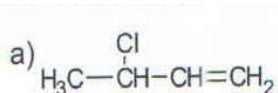
Max. Marks: 75

PART - A

Note: Answer all questions.

(10 x 2 = 20 Marks)

- 1 Define the following terms with examples:
 - (a) Homologues
 - (b) Electrophiles
- 2 Write the IUPAC name for the following structures.



- 3 What are alkenes? Write any one method of preparation of the same.
- 4 Define 'free radical'. Explain its formation with an example.
- 5 Explain the significance of esterification test.
- 6 Write the structure and uses of chlorobutanol.
- 7 Explain about Walden in version.
- 8 Write the structure and uses of hexamine.
- 9 Write the uses of amphetamine and acetylsalicylic acid.
- 10 Explain aldol condensation with an example.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 11 Explain the mechanism involved in cannizzaro and crossed-cannizzaro condensation reactions with examples.
- 12 Write any two methods of preparation of aliphatic carboxylic acids. Explain the acidity of carboxylic acids with special emphasis on effect of substituent on their acidity.
- 13 Explain the mechanism, kinetics and stereochemistry involved in SN^1 reactions of alkyl halides.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

- 14 Explain the IUPAC rules for carbonyl compounds with examples.
- 15 Differentiate between Markovnikov's and Anti-Markovnikov's addition reactions of alkenes.
- 16 Classify alkadienes with examples. Write any one preparation method for each class.
- 17 Write any two methods of preparation each for aldehydes and ketones.
- 18 Write any three qualitative tests for carbonyl compounds.
- 19 Classify alkyl halides with examples. Write any two methods of preparation for the same.
- 20 Write the preparation (any two) and reactions (any two) of alcohols.
- 21 Explain any two qualitative tests to differentiate various classes of amines.
- 22 Write the IUPAC rules and preparation methods (any two) for aliphatic carboxylic acids.

FACULTY OF PHARMACY

**B. Pharmacy II – Semester (PCI) (Backlog) Examination, March 2022 Subject:
Human Anatomy and Physiology-II**

Time: 3 Hours

Max. Marks: 75

**Note: Answer all Questions from part-A,
any two Questions from part-B & Seven Question from part-C**

PART – A (2x10 = 20 Marks)

1. Enlist the neuroglia of the CNS.
2. Mention parts of brain their major functions.
3. What is the role of pepsin?
4. What does deglutition mean.
5. List the disorders of GIT.
6. What are the functions of urinary system?
7. What is a spirometer.
8. Write a note on sex hormones.
9. Write two functions of BMR.
10. Write the function of ADH.

PART – B (2x10 = 20 Marks)

11. Write in detail about urine formation. Add a note on RAAS.
12. Write in detail about the hormones released by anterior pituitary gland.
13. Write a note on pregnancy and parturition.

PART – C (7x5 = 35 Marks)

14. Write a note on generation of action potential.
15. Define neurotransmitter. Add a note on biogenic amines.
16. What are the various phases involved in digestion?
17. Write a note on spermatogenesis.
18. Write a note on oogenesis.
19. Write a note on actions and production of thyroid hormones.
20. Briefly discuss about genetic pattern of inheritance.
21. Draw the neat diagram of spirometer and write about various volumes and capacities.
22. Write the steps involved in micturition process.

FACULTY OF PHARMACY
B. Pharmacy II Semester (PCI) (Backlog) Examination,

March 2022

Subject: Biochemistry

Time: 3 Hours

Max. Marks: 75

PART - A

Note: Answer all questions.

(10 x 2 = 20 Marks)

- 1 Explain endergonic and exergonic reaction.
- 2 Explain biological role of carbohydrates.
- 3 What is a genetic code?
- 4 Mention types of RNA & their function.
- 5 Explain in brief G6PD deficiency.
- 6 Explain De novo synthesis of fatty acids.
- 7 Explain redox potential.
- 8 What is Albinism and phenylketonuria?
- 9 Explain biological significances of ATP and cyclic AMP.
- 10 What is atherosclerosis?

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 11 Discuss the bio synthesis of Pyrimidine nucleotide.
- 12 What are enzymes? Mention their IUB classification. Write in detail on factors affecting enzyme action.
- 13 Explain about Electron transport chain (ETC) and its mechanism.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

- 14 Explain β -Oxidation of saturated fatty acid.
- 15 Write about Glycolysis pathway, energetic and significance.
- 16 Write a short note on hormonal regulation of Blood Glucose levels and Diabetes mellitus.
- 17 Write the Synthesis and significance of melatonin.
- 18 Describe Protein synthesis process in detail.
- 19 Discuss Urea cycle.
- 20 Write about Oxidative phosphorylation with mechanism.
- 21 Write about catabolism of Heme.
- 22 Explain about Gluconeogenesis pathway and significance.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, December 2021

Subject: Pathophysiology

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. What are causes of cell injury?
2. What are signs and symptoms of asthma?
3. Differentiate between myocarditis and cardiomyopathy.
4. Explain alcoholic liver disease.
5. What is jaundice?
6. Define and classify angina pectoris.
7. Define gout and write its symptoms.
8. Write about hepatitis.
9. What are the causes of meningitis?
10. Write about different types of stroke

PART- B (1 X 14 = 14 MARKS)

11. Describe pathogenesis of depression in detail.
12. Represent the pathogenesis of atherosclerosis with neat labelled diagram.
13. Explain in detail various cellular events of inflammation.

PART- C (5 X 8 = 40 MARKS)

14. Write a note on jaundice.
15. Explain the pathogenesis of asthma.
16. Discuss the pathogenesis of tuberculosis.
17. Write a brief note on schizophrenia.
18. What is megaloblastic anaemia? Discuss its pathophysiology.
19. Mention etiology and symptoms of inflammatory bowel disease.
20. Explain the etiology and pathogenesis of acute renal failure.
21. Discuss alcoholic liver disease in detail.
22. What is the role of hypertrophy in congestive heart failure?

FACULTY OF PHARMACY

**B. Pharmacy II – Semester (PCI) (Main & Backlog) Examination,
December 2021**

Subject: Human Anatomy and physiology - II

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

1. Write the functions of neuron.
2. What is the role of pepsin?
3. Write a note on RAAS.
4. Define vital capacity and its value.
5. Why artificial respiration is important?
6. Enlist the functions of male reproductive system.
7. Reaction neurotransmitters and their functions.
8. List the cell types of pancreatic islets.
9. Write the functions of androgens.
10. Define gene. List two genetic disorders.

PART – B

Note: Answer any one question.

(1 x 14 = 14 Marks)

11. Write a note on lung volumes and capacities with the help of spiograph and neat labelled diagram of spirometer.
12. Write in detail about the steps involved in menstrual cycle.
13. Discuss about the structure and functions of brain with the help of diagram.

PART – C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

14. What are the three ways that ATP can be generated?
15. Explain how respiratory areas control respiration.
16. Write a note on parturition.
17. Discuss about the posterior pituitary hormones.
18. Write about genetic pattern of inheritance.
19. Write a note on thyroid glands.
20. Write a note on components of reflex arc.
21. Define neurotransmitter. Add a note on biogenic amines.
22. What are the various phases involved in digestion?

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, December 2021

Subject: Environmental Sciences

Time: 2 Hours

Max. Marks: 50

Note: Answer any two questions from Part-A any six questions from Part-B PART- A (2 X 10 = 20 Marks)

1. What are the causes of water pollution? What are the measures to be taken to reduce water pollution?
2. List and explain the natural resources in detail. Differentiate between renewable and non renewable resources citing examples.
3. Explain aquatic ecosystems in detail.

PART- B (6 X 5 = 30 Marks)

4. Explain the economic importance of mineral resources
5. What is meant by grass land ecosystem? Explain the different grass land ecosystems.
6. Explain any 5 sources of air pollution
7. What are the different types of deserts? Explain the adaptation of plants and animals for desert life.
8. Explain in detail the structure and functions of ecosystem. What is the importance of ecosystem?
9. Explain the different forest resources
10. What are the reasons for soil pollution? What is its import on the health?
11. What are the functions of food? Add a note on the world food problems?

FACULTY OF PHARMACY

B. Pharmacy II Semester (PCI) (Main & Backlog) Examination, December 2021

Subject: Compute Application in Pharmacy

Time: 2 Hours

Max. Marks: 50

PART - A

Note: Answer any two questions.

(2 x 10 = 20 Marks)

- 1 Define number system. Explain the conversion process from binary to octal and binary to hexadecimal.
- 2 (a) Explain major components of Microsoft Access.
(b) How Barcode Labels will Work?
- 3 (a) Explain different types of Databases in Bioinformatics.
(b) Write a note on LIMS (Laboratory Information Management Systems).

PART - B

Note: Answer any six questions.

(6 x 5 = 30 Marks)

- 4 Explain the process for binary addition and binary subtraction.
- 5 Write different types of Cascading Style Sheets with examples.
- 6 What is a database? Explain about MySQL Components.
- 7 Explain about Pharmacokinetics and its stages.
- 8 Explain the impact of bioinformatics on vaccine design and development.
- 9 Write note on CS (Chromatographic data systems).
- 10 Explain the process of planning and managing the project.
- 11 How does patient monitoring system works?

FACULTY OF PHARMACY
B. Pharmacy II Semester (PCI) (Main & Backlog) Examination,
December 2021 Subject: Biochemistry

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 What is amino acid and its function in human body?
- 2 Define Enzyme induction.
- 3 What are Isoenzymes & allosteric enzymes?
- 4 What are essential fatty acids? Give two examples.
- 5 Differentiate between DNA & RNA.
- 6 Write a note on phenyl ketonuria.
- 7 Explain the deficiency of G6PD.
- 8 What is Ketoacidosis?
- 9 What is Jaundice and write its symptoms?
- 10 Explain Gout disease.

PART - B

Note: Answer any one question.

(1 x 14 = 14 Marks)

- 11 Write a note on lipid metabolism. Explain various lipid metabolism disorders.
- 12 (a) Explain urea cycle and its disorders.
(b) Explain significance of Gluconeogenesis.
- 13 Explain DNA replication process in detail.

PART - C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

14 Write a short note on Enzyme inhibitors with examples.

15 Describe various steps involved in glycolysis.

16 Write a note on conversion of cholesterol into vitamin D.

17 Write the synthesis and significance of biological 5-HT.

18 Write a note on conversion of cholesterol to bile acids.

19 Write about Oxidative phosphorylation with mechanism.

20 Explain Biosynthesis of purine.

21 Explain Structure of Coenzymes and its biochemical functions.

22 Explain Electron transport chain.

FACULTY OF PHARMACY
B. Pharmacy II Semester (PCI) (Main & Backlog) Examination,

December 2021

Subject: Pharmaceutical Organic Chemistry - I

Time: 2 Hours

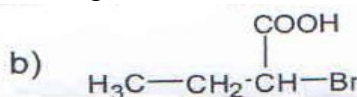
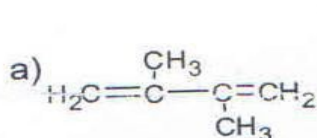
Max. Marks: 75

PART - A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 Define the following terms with examples:
 (a) Hybridization
 (b) Functional group.
- 2 Write the IUPAC name for the following structures.



- 3 Explain Saytzeff's rule with an example.
- 4 What are conjugated dienes? Write any one method of preparation of the same.
- 5 Explain the significance of Tollen's test.
- 6 Write the structure and uses of iodoform.
- 7 Classify alcohols with examples.
- 8 Explain the cannizzaro reaction with an example.
- 9 Classify aliphatic amines with examples.
- 10 Write the uses of acetyl salicylic acid and methyl salicylate.

PART - B

Note: Answer any one question.

(1 x 14 = 14 Marks)

- 11 Write any three methods for preparation each for aldehydes & ketones.
- 12 Explain Markovnikov's addition of alkenes with examples.
- 13 Define 'isomerism'. Explain various types of structural isomerism with examples.

PART - C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

- 14 Write the IUPAC rules for aliphatic carboxylic acids with suitable examples.
- 15 Write the preparation (any two) and reactions of alkanes with examples.
- 16 Explain the electrophilic addition reactions of conjugated dienes with examples.
- 17 Differentiate between SN₁ and SN₂ reactions of alkyl halides.
- 18 Explain any two qualitative tests to differentiate various classes of alcohols.
- 19 Describe the mechanism involved in aldol condensation with examples.
- 20 Explain the general mechanism involved in nucleophilic addition reactions of carbonyl compounds. Provide two examples of the same.
- 21 Explain the basicity of aliphatic amines with special emphasis on effect of substituent on their basicity.
- 22 Write the structure, IUPAC name, preparation and uses of acetic acid.

Code: 6275/PCI

FACULTY OF PHARMACY
B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination,
December 2021
Subject: Patho Physiology

Time: 2 Hours

Max. Marks: 75

PART – A

Note: Answer any Seven questions.

(7 x3=21 Marks)

1. What are causes of cell injury?
2. Mention various causes of acute renal failure.
3. Differentiate between myocarditis and cardiomyopathy.
4. Define the following terms
(a) Haemophilia (b) Sickle cell anaemia
5. What is jaundice?
6. Enumerate various thyroid diseases.
7. Define gout and write its symptoms.
8. What is peptic ulcer?
9. What are the causes of meningitis?
10. Define cell death acidosis and calcification.

PART – B

Note: Answer One question.

(1 x14=14 Marks)

11. Describe pathogenesis of depression in detail.
12. Define hypertension. Discuss etiology and pathogenesis of hypertension.
13. Explain in detail various cellular events of inflammation.

PART - C

Note: Answer any Five questions.

(5x8=40 Marks)

14. Write a note on metaplasia.
15. Explain the pathogenesis of asthma.
16. Describe the pathophysiology of congestive heart failure.
17. Write a brief note on schizophrenia.
18. Explain the causes and pathophysiology of peptic ulcer.
19. Mention etiology and symptoms of inflammatory bowel disease.
20. Define osteoporosis. Write its pathogenesis.
21. Discuss alcoholic liver disease in detail.
22. Write about urinary tract infections.
