

**FACULTY OF PHARMACY**

**B. Pharmacy II - Semester (PCI) (Backlog) Examination, April 2022**

**Subject: Pathophysiology**

**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 (2 x 10 = 20 Marks)**

1. Define the following terms  
a. Atrophy                      b. Necrosis
2. Mentions various causes of acute renal failure.
3. Define thalassemia and classify it.
4. Define the following terms  
a. Haemophilia                      b. sickle cell anaemia
5. What are the causative organisms of syphilis and gonorrhoea?
6. Enumerate various thyroid diseases.
7. What are the four principal effects of acute inflammation?
8. Write a note on AIDS.
9. What are causes and symptoms of typhoid?
10. Define cell death acidosis and calcification.

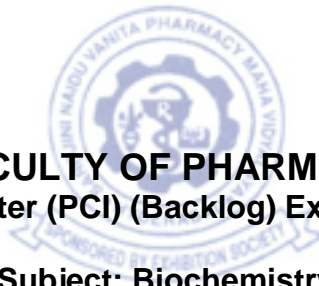
**PART - B (2 x 10 = 20 Marks)**

11. Classify cancer and explain etiopathogenesis of cancer.
12. Define hypertension. Discuss etiology and pathogenesis of hypertension.
13. Define cell injury. Explain the mechanism of cell injury.

**PART - C (7 x 5 = 35 Marks)**

14. Write a note on metaplasia.
15. Explain in brief about Alzheimer's disease.
16. Describe the pathophysiology of congestive heart failure.
17. Describe the pathophysiology of meningitis.
18. Explain the causes and pathophysiology of peptic ulcer.
19. Write a note on chemical mediators of acute inflammation.
20. Define osteoporosis. Write its pathogenesis.
21. Define homeostasis. Write various components of feedback system.
22. Write about urinary tract infections.

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**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  $\beta$ -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.

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**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).

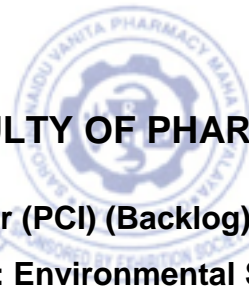
**PART - B**

**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.

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Code No: D-8161/PCI

## 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**

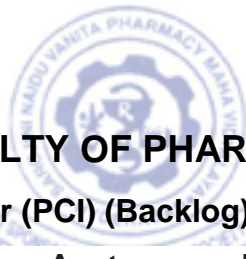
### **PART- A (2 x 10 = 20 Marks)**

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?

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Code No. D-8157/PCI

## 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.

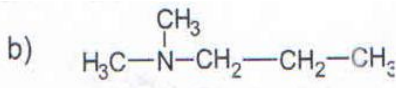
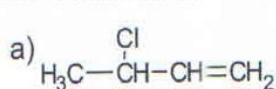
### PART – C (7x5 = 35 Marks)

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 spiograph and write about various volumes and capacities.
22. Write the steps involved in micturition process.

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**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)**

- Define the following terms with examples:
  - Homologues
  - Electrophiles
- Write the IUPAC name for the following structures.



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

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

- Explain the mechanism involved in cannizzaro and crossed-cannizzaro condensation reactions with examples.
- 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.
- Explain the mechanism, kinetics and stereochemistry involved in  $\text{SN}^1$  reactions of alkyl halides.

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

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



Code No: D8085/PCI

## 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

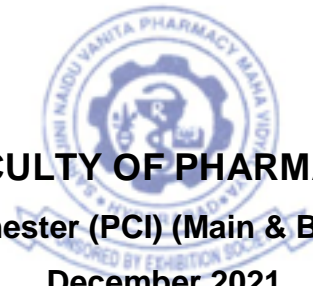
### **PART- B (1 X 14 = 14 MARKS)**

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?

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Code No: D 8082/PCI

## 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?

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Code No: D8087/PCI

## 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?

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Code No. D8086/PCI

## 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?

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Code No. D8084/PCI

**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 questions.**

**(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.

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Code No. D8083/PCI

## FACULTY OF PHARMACY

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

Subject: Pharmaceutical Organic Chemistry - I

Time: 2 Hours

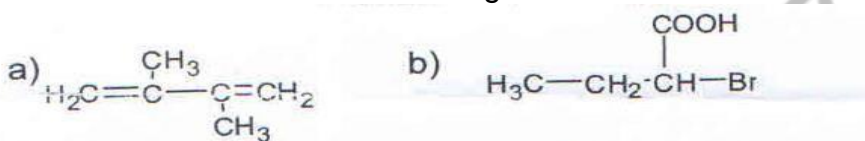
Max. Marks: 75

### 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  $\text{S}_{\text{N}}1$  and  $\text{S}_{\text{N}}2$  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.

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Code: 12057/PCI

**FACULTY OF PHARMACY**  
**B. Pharmacy II - Semester (PCI) (Backlog) Examination,**  
**September 2021**

**Subject: Human Anatomy and Physiology - II**

**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 (7 X 3 = 21 Marks)**

1. Write the functions of cerebrospinal fluid.
2. Draw a neat labeled diagram of brain.
3. What is the basic process performed by digestive system?
4. List the functions of Stomach.
5. What is peptic ulcer disease?
6. Define Congenital defects.
7. List the female sex hormones.
8. What are important functions of thyroid gland?
9. Mention important functions of Liver.
10. What is the role of pancreas?

**PART – B (1 x 14 = 14 Marks)**

11. (a) Describe the protective structure and gross anatomical features of the Spinal Cord.  
(b) Describe the functional components of reflex arc.
12. Describe the phases of the female reproductive cycle.
13. Explain different lung volumes and capacities with the diagram of Spirograph and Spirometer.

**PART - C (5 x 8 = 40 Marks)**

14. Explain the events associated with the three stages of labor.
15. Discuss the process of Oogenesis in ovaries.
16. Explain about the Action Potential.
17. Describe the structure and function of the layers that form the wall of GIT.
18. Explain the physiology of Urine formation.
19. Give a note on hypothalamus.
20. Write a detail note on pituitary gland and its hormone.
21. Write a note on mechanism of respiration.
22. Explain RAS pathway in regulation of Kidney function.

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Code: 12058/PCI

## FACULTY OF PHARMACY

B. Pharmacy II-Sem. (PCI) (Backlog) Examination, September 2021

Subject: Pharmaceutical Organic chemistry - 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 (7 X 3 = 21 Marks)

1. Define the following terms with examples:  
(a) Functional group (b) Electrophile.
2. Write the IUPAC name for the following structures:  
(a)  $\text{H}_3\text{C} - \text{CH}_2 - \underset{\text{C}_2\text{H}_5}{\text{C}} = \text{CH}_2$                       (b)  $\text{H}_3\text{C} - \underset{\text{OH}}{\text{CH}} - \text{CH}_2 - \text{CH}_3$
3. Explain  $\text{Sp}^2$  hybridization with an example.
4. Define 'free radical'. Explain its formation with an example.
5. Explain the significance of esterification test.
6. Give one example for cis-and trans-isomers.
7. Classify alkylhalides with examples.
8. Write the structure and uses of glycerol and ethylalcohol.
9. Write the structure and uses of benzaldehyde and Cinnamaldehyde.
10. Write the structure and uses of salicylic acid and amphetamine.

### PART – B (1 x 14 = 14 Marks)

11. (a) Explain any two methods of preparations of alkanes.  
(b) Explain Markovnikov's addition of alkenes giving examples.
12. Explain the mechanism involved in cannizzaro and crossed-cannizzaro reactions with relevant examples.
13. (a) Write the structure and uses of benzoic acid and acetyl salicylic acid.  
(b) Explain the acidity of Carboxylic acids with special emphasis on effect of substituent on their acidity.

### PART - C (5 x 8 = 40 Marks)

14. Write the IUPAC rules for alkenes with suitable examples (minimum five).
15. Describe the mechanism of 1, 2-/1, 4-addition reactions of conjugated dienes with an example.
16. Explain about halogenation of alkanes with examples.
17. Describe the mechanism and stereochemistry of  $\text{S}_\text{N}^2$  reactions.
18. Write any two qualitative tests to differentiate various classes of alcohols.
19. Explain the mechanism involved in the aldol condensation with examples.
20. Give any three qualitative tests to identify and differentiate aldehydes and ketones.
21. Explain about structural isomerism with examples.
22. How will you differentiate primary, secondary and tertiary amines based on qualitative tests?

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Code: 12059/PCI

## FACULTY OF PHARMACY

### B. Pharmacy II-Semester (PCI) (Backlog) Examination, September 2021

Subject: Biochemistry

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 (7 X 3 = 21 Marks)

1. Write biological significance of ATP.
2. Describe the utilization of ketone bodies by the body.
3. Explain hormonal regulation of glucose level in blood.
4. What is diabetes mellitus?
5. What are co-enzymes?
6. What is atherosclerosis?
7. Write significance of HMP Shunt pathway.
8. Differentiate between enzyme induction and repression.
9. What are the functions of Vitamin D and mention deficiency disorders.
10. Describe nitrogenous bases with examples.

#### PART – B (1 x 14 = 14 Marks)

11. Describe citric acid cycle and glycogenesis pathway.
12. Explain about various disorders of lipid metabolism.
13. Define enzymes. Write about IUB classification of enzymes and enzyme inhibitors with examples.

#### PART - C (5 x 8 = 40 Marks)

14. Explain in-detail about energy rich compounds.
15. Write about de novo synthesis of fatty acids (palmitic acid).
16. Explain about electron transport chain (ETC) and its mechanism.
17. Write biological role and classification of amino acids with examples.
18. Describe glycolysis pathway.
19. Describe biosynthesis and significance of dopamine, noradrenaline and adrenaline.
20. Write the biosynthesis of Pyrimidine nucleotides.
21. Explain therapeutic, diagnostic applications of enzymes and isoenzymes.
22. Describe the production of bile acids and steroid hormones from cholesterol.

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Code: 12061/PCI

## FACULTY OF PHARMACY

**B. Pharmacy II-Semester (PCI) (Backlog) Examination,  
September 2021**

**Subject: Computer Applications in Pharmacy**

**Time: 1 ½ Hours**

**Max. Marks: 50**

**Note: Answer any two questions from Part – A, and six questions from Part – B.**

### **PART – A (2X 10 = 20)**

1. What is HTML? Explain any 10 HTML tags.
2. Explain about Laboratory Information management System (LIMS) with needs and Applications of LIMS.
3. Write about application of computers in Pharmacy.

### **PART – B (6 x 5 = 30)**

4. Explain with example for One's complement & Two's complement method.
5. Describe about Extensible Mark-up Language characteristics and advantages of XML.
6. What is a web server? Write different types of servers.
7. Explain role of computers in hospital and clinical pharmacy.
8. Write about functions and features of Pharmacy information systems (PIS).
9. Explain about objective of Bioinformatics.
10. Write about barcode and its advantages.
11. Explain about Text Information Management System (TIMS).

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Code: 12062/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Sem. (PCI) (Backlog) Examination, September 2021**

**Subject: Environmental Sciences**

**Time: 1 ½ Hours**

**Max. Marks: 50**

**Note: Answer two questions from Part – A, and any six questions from Part – B**

**PART – A (2 X 10 = 20)**

1. Discuss about soil pollution, its effect on food and health. Write about the measures to prevent Soil pollution.
2. What are renewable and non-renewable energy resources? Write about the advantages and disadvantages of these resources.
3. Write about the concept, structure and functions of Grassland ecosystem.

**PART – B (6 x 5 = 30)**

4. Explain why multi disciplinary approach is required to preserve the environmental balance.
5. Write about the forest resources. Measure to preserve the forest resources.
6. Discuss about the soil pollution. Write about the measures to prevent the soil pollution.
7. Write about the water pollution. Explain the effect of water pollution on human health.
8. Mention various mineral resources. Discuss about the maintenance of mineral resources.
9. Write about the air pollution. Explain the measures to prevent the air pollution in urban areas.
10. Mention about various food resources. Explain the methods to preserve the natural food resources and methods to prevent food contamination.
11. Write about aquatic resources. Explain the methods to preserve the aquatic resources.

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Code: 12060/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Backlog) Examination, September 2021**

**Subject: Patho Physiology**

**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 (7 X 3 = 21 Marks)**

1. Define the following terms  
(a) Atrophy (b) Necrosis
2. What are signs and symptoms of asthma?
3. Define thalasemia and classify it.
4. Explain alcoholic liver disease.
5. What are the causative organisms of syphilis and gonorrhoea?
6. Define and classify angina pectoris.
7. What are the four principal effects of acute inflammation?
8. Write about hepatitis.
9. What are the causes and symptoms of typhoid?
10. Mention about different types of stroke.

**PART – B (1 x 14 = 14 Marks)**

11. Classify cancer and explain etiopathogenesis of cancer.
12. Represent the pathogenesis of atherosclerosis with neat labeled diagram.
13. Define cell injury. Explain the mechanism of cell injury.

**PART - C (5 x 8 = 40 Marks)**

14. Write a note on jaundice.
15. Explain in brief about Alzheimer's disease.
16. Discuss the pathogenesis of tuberculosis.
17. Describe the pathophysiology of meningitis.
18. What is megaloblastic anaemia? Discuss its pathophysiology.
19. Write a note on chemical mediators of acute inflammation.
20. Explain the etiology and pathogenesis of acute renal failure.
21. Define homeostasis. Write various components of feedback system.
22. What is the role of hypertrophy in congestive heart failure?

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Code:6275/PCI

**FACULTY OF PHARMACY**  
**B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination,**  
**December 2020**  
**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.

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Code:6276/PCI

## FACULTY OF PHARMACY

**B. Pharmacy II-Sem. (PCI) (Main & Backlog) Examination, November 2020**

**Subject: Computer Applications in Pharmacy**

**Time: 2 Hours**

**Max. Marks: 50**

**Note: Answer any TWO Questions from Part – A, and SIX questions from Part – B.**

### **PART – A (2 X 10 = 20)**

**Answer any TWO questions from the following.**

1. What is number system? Explain converting binary to decimal and decimal to binary.
2. What is DBMS? Explain characteristics and applications of DBMS.
3. Write about MS ACCESS and databases.

### **PART – B (6 x 5 = 30)**

**Answer any SIX questions from the following.**

4. Explain about Data flow diagrams.
5. Explain about HTML.
6. Write about major components of Microsoft Access with its advantages and disadvantages.
7. How does the Barcode Labels Work? Write benefits of Barcodes.
8. Explain the concept of diagnostic and lab diagnostic systems.
9. Write about application of Bioinformatics.
10. Explain about Chromatographic data analysis (CDS).
11. Describe drug information storage and retrieval with different types of storage media's.

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Code: 6273/PCI

**FACULTY OF PHARMACY**  
**B. Pharmacy II-Semester (PCI)(Main & Backlog)Examination,**  
**November 2020**

**Subject: Pharmaceutical Organic Chemistry - I**

**Time : 2 Hours**

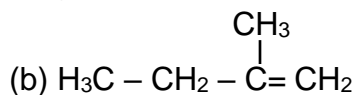
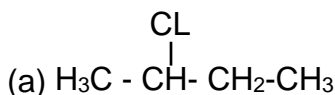
**Max. Marks: 75**

**PART – A**

**Note: Answer Seven Questions.**

**(7 X 3 = 21 Marks)**

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



3. Explain  $\text{Sp}^3$  hybridization with an example.
4. Define 'Carbocation'. Explain its formation with an example.
5. Give the classification of alkenes with examples.
6. Write the structure and uses of ethylchloride and Iodoform.
7. Classify alcohols with examples.
8. Explain the significance of Tollen's test.
9. Write the structure and uses of acetyl salicylic acid and ethanolamine.
10. Explain benzoin Condensation with an example.

**PART – B**

**Note: Answer One Question.**

**(1X14 = 14 Marks)**

11. Define 'isomerism'. Explain various types of structural isomerism with examples.
12. (a) Write any two methods of preparation of alkylhalides.  
(b) Explain  $\text{SN}^2$  reactions of alkyl halides giving special emphasis on Walden inversion.
13. Explain the mechanism involved in aldol condensation and crossed-aldol condensation with relevant examples.

**PART – C**

**Note: Answer Five Question.**

**(5X8 = 40 Marks)**

14. Explain the IUPAC rules for alkylhalides with examples.
15. Describe about free-radical substitution reactions of alkanes with examples.
16. Explain about electrophilic addition reactions of alkenes with examples.
17. Write a note on stability of conjugated dienes.
18. Give any two methods of preparation each for aldehydes & Ketones.
19. Describe the Hinsberg method of separation of amines with examples.
20. Explain the acidity of carboxylic acids with special emphasis on effect of substituents on their acidity.
21. Write the structure and uses of any five Carbonyl Compounds.
22. How do you differentiate among primary, secondary and tertiary alcohols? Give any two qualitative tests.

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SNVPMV Library



Code: 6272/PCI

## FACULTY OF PHARMACY

**B. Pharmacy II-Sem. (PCI) (Main & Backlog) Examination, November 2020**

**Subject : Human Anatomy and Physiology - II**

**Time: 2 Hours**

**Max. Marks: 75**

### PART – A

**Note: Answer Seven Questions.**

**(7 X 3 = 21 Marks)**

1. Write the function of nervous system.
2. What are the functions of spinal cord?
3. What is the role of pepsin?
4. Enlist the disorders of GIT.
5. Mention important functions (three) of thyroid gland.
6. Write the functions of female reproductive system.
7. Define BMR, mention the factors affecting it.
8. Define micturition.
9. Mention any four important functions of Liver.
10. Mention the Male and Female sex hormones.

### PART – B

**Note: Answer One Question.**

**(1X14 = 14 Marks)**

11. Discuss the process of digestion in detail along with anatomical diagram and functions of stomach.
12. Draw the anatomical diagram of brain and label various parts. Explain the functions of cerebellum.
13. Mention various endocrine glands. Discuss the anatomy and physiological functions of thyroid and parathyroid gland.

### PART – C

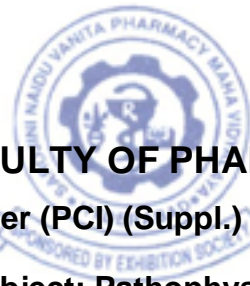
**Note: Answer Five Question.**

**(5X8 = 40 Marks)**

14. Explain how nervous system controls respiratory system.
15. Describe three phases of digestion.
16. List the sequence of events that generate action potential.
17. Explain RAS pathway in regulation of kidney function.
18. Discuss the process of spermatogenesis in the testis.
19. Write a note on protein synthesis.
20. Explain the release and functions of growth hormones.
21. Explain in detail about oxidative phosphorylation.
22. Describe the structure and function of brain stem.

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SNVPMV Library



Code No. 13101/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II – Semester (PCI) (Suppl.) Examination, February 2019**

**Subject: Pathophysiology**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

**PART – A (10X2 = 20 Marks)**

1. Define cell injury
2. What causes arthritis?
3. Define the following.
  - a) Angina pectoris
  - b) Congestive heart failure
4. Mention the parts of heart.
5. What is the role of mast cells in asthma?
6. Mention the types of anaemia.
7. What are the causes of the chronic renal failure?
8. Distinguish between exocrine and endocrine gland.
9. What are the signs and symptoms of peptic ulcer.
10. What is the cause of jaundice?

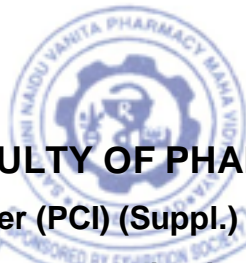
**PART – B (2X10 = 20 Marks)**

11. Define cell injury. Explain the mechanisms of cell injury.
12. What is hypertension? Explain the pathophysiology of hypertension.
13. Discuss neural basis of epilepsy. Add a note on types of epilepsies.

**PART – C (7X5 = 35 Marks)**

14. Explain the role of various chemical mediators of inflammation.
15. Explain briefly about hyperplasia.
16. Describe the pathophysiology of thalassemia
17. What is ischemic heart disease? Explain its types.
18. Discuss the pathogenesis of bronchial asthma.
19. Write a note on hypo and hyperthyroidism.
20. What is Alzheimer disease? Enumerate its signs and symptoms.
21. What are peptic ulcers? Discuss pathophysiology.
22. Describe the causes and symptoms of AIDS.

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Code No. 13102/PCI

## FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI) (Suppl.) Examination, February 2019

Subject: Computer Applications in Pharmacy

Time: 2 Hours

Max.Marks: 50

Note: Answer any two questions from Part – A and any six questions from Part – B.

### PART – A (10x2 = 20 Marks)

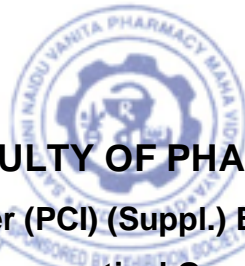
- 1 Explain different number systems used in computer's (binary, decimal, octal, hexadecimal).
- 2 Describe about laboratory information management system.
- 3 Write about XML.

### PART – B (6x5 = 30 Marks)

- 4 Explain the concept of data flow diagrams.
- 5 Discuss about web servers and server products.
- 6 Differentiate hospital and clinical pharmacy.
- 7 Discuss about databases of bioinformatics.
- 8 Write about electronic prescribing and discharge systems.
- 9 Explain about HTML.
- 10 Write a note on biological databases.
- 11 What are objectives of bioinformatics?

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Code No. 13099 / PCI

## FACULTY OF PHARMACY

B. Pharmacy II Semester (PCI) (Suppl.) Examination, February 2019

Subject: Pharmaceutical Organic Chemistry – I

Time: 3 Hours

Max. Marks: 75

Note: Answer all questions from Part- A, Any two questions from Part – B and Any seven questions from Part – C.

**PART – A (10 x 2 = 20 Marks)**

Answer ALL questions. All questions carry equal marks.

- Define the following terms with examples.
  - Aromatic compounds
  - Functional group
- Write the common name and IUPAC name for the following structures.
  - $$\begin{array}{c} \text{H}_3\text{C} - \text{CH}_2 - \text{CH} - \text{CHO} \\ | \\ \text{CH}_3 \end{array}$$
  - $\text{H}_3\text{C} - \text{CH}_2 - \text{O} - \text{CH}_2 - \text{CH}_3$
- Give an example for a cis and trans isomer.
- Write the structures and uses of any two carboxylic acid compounds.
- Classify alcohols with relevant examples.
- Explain the significance of Tollen's test.
- Write the structure and uses of acetone and hexamine.
- Write the structure uses of benzoic acid and acetyl salicylic acid.
- What is an amine? Give structures and uses of any two amines.
- Write the structures and uses of ethyl alcohol and glycerol.

**PART – B (2 x 10 = 20 Marks)**

Answer any TWO questions. All questions carry equal marks.

- Define 'isomerism'. Explain various types of structural isomerism with relevant examples. 10
- Differentiate between  $\text{SN}^1$  and  $\text{SN}^2$  reactions and discuss their mechanisms with examples. 10
- Explain the mechanism involved in aldol condensation and mention about crossed-aldol condensation. 10

..2



**PART – C (7x 5 = 35 Marks)**

**Answer any SEVEN questions. All questions carry equal marks.**

- 14 Explain the IUPAC rules for alkenes with suitable examples.
- 15 Explain the 1,2 / 1,4-addition reactions of alkadienes.
- 16 Write any two methods for synthesis of alkyl halides with suitable examples.
- 17 How do you distinguish among primary, secondary and tertiary alcohols based on chemical reactions?
- 18 Explain the mechanism involved in nucleophilic addition reactions of carbonyl compounds. Give any two examples.
- 19 Write any two qualitative tests of carbonyls.
- 20 Write the preparation of esters and amides with suitable examples.
- 21 Explain the Hinsberg method of separation of amines.
- 22 Explain in detail about stability of conjugated dienes.

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**FACULTY OF PHARMACY**

**B. Pharmacy II – Semester (PCI)(Main) Examination, July 2018**

**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 and any seven questions from Part-C.**

**PART – A (10x2 = 20 Marks)**

**Answer all questions. All questions carry equal marks.**

- 1 Write a note on role of pepsin in digestion.
- 2 What are the various neurotransmitters?
- 3 Mention the physiological significance of BMR.
- 4 What is artificial respiration?
- 5 Enlist the hormones of pancreas with their function.
- 6 List out the functions of DNA.
- 7 Name few disorders of kidney.
- 8 What are the functions of female reproductive system?
- 9 Discuss the role of ATP in biological system.
- 10 Explain the disorders related to thyroid gland.

**PART – B (2x10 = 20 Marks)**

**Answer any two questions. All questions carry equal marks.**

- 11 Discuss the anatomy and functions of GI tract with a neat labelled diagram.
- 12 Discuss the anatomy and functions of kidney with a neat labelled diagram.
- 13 a) Write a note on various respiratory centers.  
b) Add a note on lung volumes and capacities of spirogram with a neat labelled diagram.

**PART – C (7x5 = 35 Marks)**

**Answer any seven questions. All questions carry equal marks.**

- 14 Define reflex action. Add a note on various components of reflex arc.
- 15 Explain the various parts of brain with a labelled diagram.\
- 16 Write a note on physiology of urine formation.
- 17 Write a note on a role of RAS in kidneys.
- 18 What are the various evaluation techniques used to know the kidney functions?
- 19 Write a note on anatomy of male reproductive system.
- 20 Write in detail about Oogenesis.
- 21 What are the hormones secreted by pituitary gland and their functions.
- 22 Explain the genetic pattern of inheritance.

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Code No. 1228 / PCI

## FACULTY OF PHARMACY

**B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018**

**Subject: Computer Applications in Pharmacy**

**Time: 2 Hours**

**Max.Marks: 50**

**Note: Answer any two questions from Part – A & any six questions from Part – B.**

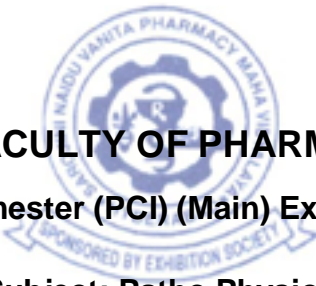
### **PART – A (10x2 = 20 Marks)**

- 1 What is a number system? Convert binary number into decimal, octal, hexadecimal and vice versa with example.
- 2 Describe any 10 HTML tags
- 3 Write about electronic prescribing and discharge system.

### **PART – B (6x5 = 30 Marks)**

- 4 Write a note on Web servers and server products.
- 5 what is database? Explain about MS Access database.
- 6 Write about diagnostic and lab-diagnostic system.
- 7 Write a note on data flow diagrams.
- 8 Explain the concept of chromatographic data analysis.
- 9 Discuss about applications of computers in pharmacy.
- 10 Illustrate text information management system.
- 11 Write about XML.

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Code No. 1230/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018**

**Subject: Patho Physiology**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

**PART – A (10X2 = 20 Marks)**

1. What are the patterns of cell death?
2. Define the following:  
(a) Hyperplasia (b) Atrophy
3. What is diabetes? How it is caused?
4. Differentiate between asthma and COPD.
5. Define Angina pectoris and congestive heart failure.
6. Explain the pathophysiology of Parkinson's disease.
7. What are the causes of hepatitis B?
8. Define osteoporosis and osteoarthritis.
9. What is neoplasm? List out the types of neoplasm's.
10. What is meningitis and it's symptoms?

**PART – B (2X10 = 20 Marks)**

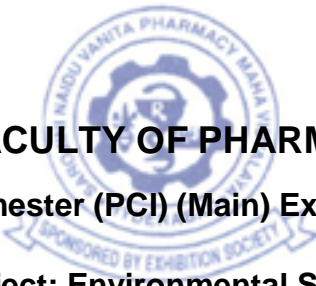
11. Write briefly about the principle of wound healing in the skin.
12. Describe the reversible and irreversible cell injury
13. Discuss the pathophysiology of any one disease.

**PART – C (7X5 = 35 Marks)**

14. Define hypertension. Explain the factors affecting it.
15. What is anaemia? Classify various types of anemia.
16. Discuss the pathogenesis of bronchial asthma.
17. What is Parkinson's disease? Enumerate its signs and symptoms.
18. What are sex hormones? Discuss any one sex hormone disorder.
19. Define gout? Discuss its causes and symptoms.
20. Explain etiology and pathogenesis of schizophrenia.
21. Define inflammation. Explain the causes of chronic inflammation.
22. What are the causes of liver cirrhosis?

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**SNVPMV Library**



Code No. 1229/PCI

## FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018

Subject: Environmental Sciences

Time: 2 Hours

Max. Marks: 50

**Note: Answer two questions from Part – A, Any six questions from Part – B.**

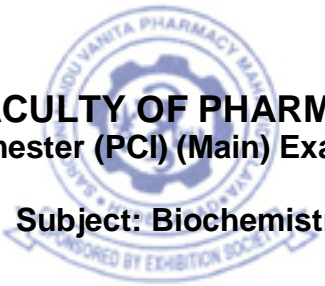
### PART – A (2X10 = 20 Marks)

1. Classify the different types of forests. What are the resources that we get from forest.
2. Explain the different aquatic ecosystems. Explain each one in detail.
3. Classify the natural resources. Briefly explain each one.

### PART – B (6X5 = 30 Marks)

4. Define ecosystem. What is the structure of an ecosystem?
5. Briefly explain the reasons for water stress.
6. Explain the different desert ecosystems.
7. What are the causes of air pollution?
8. What are the different mineral resources? List and give the uses of some minerals.
9. Why land is considered as a natural resource? What is weathering?
10. Explain the different grass land ecosystems.
11. What are the different energy resources? Explain any two in detail.

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Code No. 1227/PCI

**FACULTY OF PHARMACY**  
**B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018**

**Subject: Biochemistry**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

**PART – A (10X2 = 20 Marks)**

1. What is a Carbohydrate and its function in human body?
2. What are glycogen storage disease?
3. Define protein and write its functions in human body
4. What is atherosclerosis.
5. What are energy rich compounds?
6. What is a genetic code?
7. Define Enzyme induction.
8. Define coenzymes with biochemical functions.
9. What is jaundice and its symptoms?
10. Define De novo synthesis of fatty acids..

**PART – B (2X10 = 20 Marks)**

11. (a) Write about the biological significance of ATP and cyclic AMP (3)  
(b) Write about Citric acid cycle pathway, energetics and significance (7)
- 12 Write a note on lipid metabolism. Explain various lipid metabolism disorders (10)
- 13 (a) Explain about amino acid metabolism (5)  
(b) Write about Urea cycle and its disorders (5)

**PART – C (7X5 = 35 Marks)**

14. Explain about Electron transport chain (ETC) and its mechanism.
15. Write a note on Transamination and deamination of amino acid metabolism
16. Write about catabolism of purine nucleotides.
17. Write in detail about  $\beta$  Oxidation of saturated fatty acids.
18. Write a short note on Enzyme inhibitors with examples.
19. Write a short note on hormonal regulation of Blood Glucose levels and Diabetes mellitus.
20. Explain about hyperbilirubinemia and jaundice.
21. Write about Glycolysis pathway, energetic and significance.
22. Explain about diagnostic and therapeutic applications of enzymes and isoenzymes.

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**FACULTY OF PHARMACY**
**B. Pharmacy II-Semester (PCI) (Main) Examination, August 2018**
**Subject: Pharmaceutical Organic Chemistry – I**
**Time: 3 Hours**
**Max. Marks: 75**
**Note: Answer all questions from Part- A, Any two questions from Part – B and Any seven questions from Part – C.**
**PART – A (10 x 2 = 20 Marks)**
**Answer ALL questions. All questions carry equal marks.**

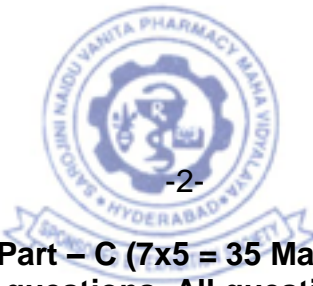
- Define the following terms with examples:
  - Aliphatic compounds
  - Aromatic compounds.
- Write the common name and IUPAC name for the following structures.
  - $$\text{H}_3\text{C} - \text{CH}_2 - \underset{\text{CH}_3}{\text{CH}} - \overset{\text{O}}{\parallel} \text{C} - \text{OH}$$
  - $$\text{H}_3\text{C} - \text{CH}_2 - \overset{\text{O}}{\parallel} \text{C} - \text{CH}_3$$
- Write the structures and uses of any two aldehydes or ketones.
- What is a carbocation? Give two examples.
- Write the structure and uses of benzoic acid and salicylic acid.
- Write the general structures of an amide and an ester by giving examples.
- What is hybridization.
- Explain the significance of esterification test.
- Aliphatic amines are more basic than aromatic amines. Justify.
- What is an electrophile? Give examples.

**PART – B (2x10 = 20 Marks)**
**Answer any TWO questions. All questions carry equal marks.**

- Differentiate between Markovnikov's and Anti-Markovnikov's addition of alkenes. 5
  - Write about addition reactions of dienes. 5
- What are alkyl halides? Give examples. Discuss the  $\text{SN}_1$  and  $\text{SN}_2$  reactions and mechanism with examples. 10
- Discuss about various reactions (minimum 5) of aldehydes and ketones with examples. 10

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**Part – C (7x5 = 35 Marks)**

**Answer any SEVEN questions. All questions carry equal marks.**

- 14 Write the IUPAC rules for nomenclature of carbonyls compounds (aldehydes & ketones) with examples.
- 15 Write the structures and uses of any five alcohol compounds.
- 16 Describe the mechanism involved in halogenation of alkanes with special emphasis on chlorination of propane.
- 17 Give a note on oxidation of alcohols.
- 18 Write the structure, IUPAC name and uses of chloroform and tetrachloroethylene.
- 19 Write any two methods of preparation for each of aldehydes and ketones.
- 20 Explain the mechanism involved in cannizzaro reaction with examples.
- 21 Classify amines with examples and give the structures and uses of any two amine compounds.
- 22 Explain the acidity of carboxylic acids with special emphasis on effect of substituent on their acidity.

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Code No. 6047/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II - Semester (PCI) (Supplementary) Examination,  
February 2020**

**Subject: Biochemistry**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all Questions from Part – A, and Two questions from Part – B,  
and any Seven questions from Part – C.**

**PART – A (10 X 2 = 20)**

1. Define Transamination & Deamination.
2. What is ketoacidosis?
3. Write the functions of Nucleic acids.
4. Define & classify carbohydrates.
5. What are Isoenzymes & allosteric enzymes?
6. Enlist metabolic disorders of phenylalanine & tyrosine.
7. Give biological significance of proteins.
8. What are essential fatty acids? Give two examples.
9. Mention types of RNA & their function.
10. Explain in brief G6PD deficiency.

**PART – B (2 x 10 = 20)**

11. Discuss the bio synthesis of Pyrimidine nucleotide.
12. Write an essay on electron transport chain & oxidative phosphorylation.
13. What are enzymes? Mention their IUB classification. Write a note on factors affecting enzyme action.

**PART - C (7 x 5 = 35)**

14. Describe various steps involved in glycolysis.
15. Explain in brief,  $\beta$ -oxidation of fatty acids.
16. Write a note on Enzyme inhibition.
17. Discuss about energy rich compounds & redox potential.
18. Describe RNA synthesis.
19. Explain the physiological importance of pentose phosphate pathway.
20. Write a note on synthesis & significance of 5-HT (serotonin).
21. Discuss urea cycle.
22. Write a note on conversion of cholesterol into vitamin D.

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Code No. 6048/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Supplementary) Examination, January 2020**

**Subject: Patho Physiology**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all Questions from Part – A, and Two questions from Part – B, and any Seven questions from Part – C.**

**PART – A (10 X 2 = 20)**

1. Write a note on thyrotoxicosis.
2. Define the terms Invasion & Metastasis.
3. Explain the clinical features of acute renal failure.
4. What are autoimmune disorders?
5. Differentiate Atherosclerosis & Arteriosclerosis.
6. Write the pathogenesis of sickle cell anemia.
7. Explain Atrophy & Anaplasia.
8. Mention the Etiological factors for asthma.
9. What is gout, explain?
10. Mention the chemical mediators in inflammation.

**PART – B (2 x 10 = 20)**

11. Write in detail about pathogenesis of COPD.
12. Enumerate the events in pathogenesis of cancer.
13. Discuss the etiopathogenesis of Epilepsy & Alzheimer's disease.

**PART - C (7 x 5 = 35)**

14. Explain the role of H. Pylori in peptic ulcer.
15. Write a note on ischemic heart disease.
16. Discuss the pathogenesis of anemia.
17. Write a note on lymphocytes.
18. Explain the etiopathogenesis of tuberculosis.
19. Define stroke and explain its pathogenesis.
20. Write a note on irritable bowel syndrome.
21. Explain the pathogenesis of osteoporosis.
22. Discuss in briefly about electrolyte balance.

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Code No. 6058/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Supplementary) Examination, January 2020**

**Subject: Environmental Sciences**

**Time: 2 Hours**

**Max. Marks: 50**

**Note: Answer any Two Questions from Part – A, and Six questions from Part – B.**

**PART – A (2 X 10 = 20)**

1. Explain the role of an individual in conservation of Natural resources.
2. Describe the concept of an Ecosystem.
3. Describe the sources of Air pollution.

**PART – B (6 x 5 = 30)**

4. Write briefly about scope of Environmental sciences.
5. What are the functions of Forest resources?
6. Describe the Desert Ecosystem.
7. Distinguish between Renewable and Non-Renewable resources with example.
8. "Flow of energy through various trophic levels in an ecosystem is unidirectional and non-cyclic" :- Explain.
9. Write a note on pyramid of Numbers and pyramid of Biomass.
10. Explain causes of Water pollution.
11. What are measures to control soil pollution?

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Code No. 6049/PCI

## FACULTY OF PHARMACY

### B. Pharmacy II-Semester (PCI) (Supplementary) Examination, January 2020

**Subject: Computer Applications in Pharmacy**

**Time: 2 Hours**

**Max. Marks: 50**

**Note: Answer any Two Questions from Part – A, and Six questions from Part – B.**

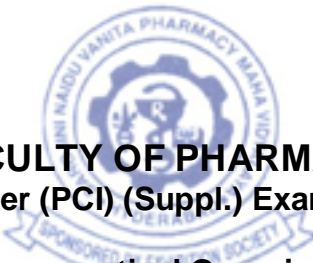
#### **PART – A (2 X 10 = 20)**

1. What is number system? Write Decimal to Binary conversion, Octal to Binary Conversion.
2. (i) Discuss briefly about the applications of computers in drug designing and validation.  
(ii) Mention the application of computers in hospital and clinical pharmacy.
3. (i) Write a note on web servers and server products.  
(ii) Write about various databases.

#### **PART – B (6 x 5 = 30)**

4. Define HTML and XML? Difference between HTML and XML.
5. Explain the project process life cycle.
6. Explain drug information storage and retrieval system.
7. What are the importances of clinical studies?
8. Write a short note on Bioinformatics Databases.
9. Explain laboratory information management system.
10. How to create a Data base table in MS ACCESS.
11. Write a note on TIMS (Text Information Management System).

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Code No. 6046 / PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Suppl.) Examination, January 2020**

**Subject : Pharmaceutical Organic Chemistry – I**

**Time : 3 Hours**

**Max. Marks: 75**

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

**PART – A (10x2=20 Marks)**

- 1 What is Isomerism? Explain with examples.
- 2 Write the IUPAC names of the following structures.  
(a)  $\text{CH}_3 - \underset{\text{I}}{\text{CH}}(\text{OH}) - \text{CH}_2 - \underset{\text{II}}{\text{C}}(\text{O}) - \text{H}$       (b)  $\text{CH}_3 - \underset{\text{II}}{\text{C}}(\text{O}) - \text{O} - \text{C}_2\text{H}_5$
- 3 Write any two preparation methods of Olefins.
- 4 Write the structure and uses of (a) Chloroform (b) Propylene glycol
- 5 What is Saytzeff's rule?
- 6 Write any two qualitative tests of esters.
- 7 Write the differences between  $\text{SN}^1$  and  $\text{SN}^2$  reactions.
- 8 What is Walden inversion?
- 9 Write the structures of citric acid and amphetamine.
- 10 What is a carbocation? How it is formed?

**PART – B (2x10=20 Marks)**

- 11 (a) Explain the mechanism and stereochemistry of  $\text{SN}^1$  and reaction. (6)  
(b) Write the factors affecting nucleophilic substitution reaction. (4)
- 12 (a) Explain the mechanism of Cannizaro reaction. (5)  
(b) Write about 1, 2, - addition and 1, 4 – addition of conjugated dienes. (5)
- 13 What is  $\text{E}_2$  reaction? Explain its mechanism. Explain the evidences of  $\text{E}_2$  reaction? (2+3+5)

**PART – C (7x5=35 Marks)**

- 14 Write the preparation methods of alkylhalides.
- 15 Write any five nucleophilic addition reactions of aldehydes followed by loss of water molecule.
- 16 Explain the mechanism of benzoin condensation.

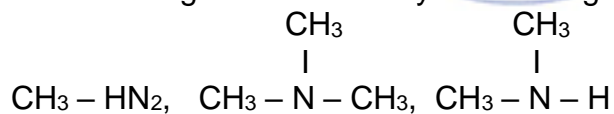


Code No. 6046 / PCI

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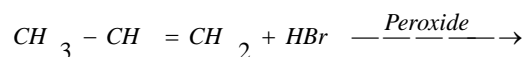


17 Write the increasing order of basicity of following amines and justify



18 Explain the mechanism of electrophilic addition reactions of alkenes.

19 Write the product of the following reaction and explain the mechanism.



20 Write the structures and uses of :

(2+1+2)

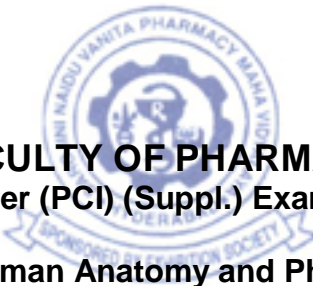
- (a) Formaldehyde
- (b) Acetone
- (c) Hexamine

21 Explain the chemical reactions of carboxylic acids.

22 Explain in detail about stability of primary, secondary and tertiary carbocations.

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Code No. 6045 / PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Suppl.) Examination, January 2020**

**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 and any seven questions from Part – C.**

**PART – A (10x2=20 Marks)**

- 1 Define the terms Reflex and Reflex arc.
- 2 What is the importance of salivary glands?
- 3 Define the term Asthma, what are symptoms?
- 4 Explain Maturation reflex.
- 5 What is circadian rhythm?
- 6 What is homeostasis?
- 7 Define the term Osmosis, osmotic pressure.
- 8 What is BMR? Explain its importance.
- 9 Mention the components of WBCs.
- 10 What is the importance of sperm?

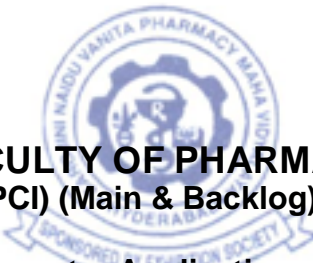
**PART – B (2x10=20 Marks)**

- 11 (a) Write in detail about "Diencephalon". (6)
- (b) Enumerate the functions of thalamus. (4)
- 12 (a) Write in detail about the transport of O<sub>2</sub> and CO<sub>2</sub> (oxygen and carbon dioxide) in the blood. (6)
- (b) Explain the factors affecting the transport of O<sub>2</sub> and CO<sub>2</sub>. (4)
- 13 (a) Explain about female reproductive cycle with diagram. (5)
- (b) Give a note on sex hormones. (5)

**PART – C (7x5=35 Marks)**

- 14 Write a note on Neurotransmission with a neat labeled diagram.
- 15 Write short notes on digestion of proteins in GIT.
- 16 Briefly write about formation, storage and release of Thyroid hormones.
- 17 Write a internal and external respiration with suitable diagrams.
- 18 Explain Oogenesis with a diagram.
- 19 Write a note on different types of peristalses in GIT.
- 20 Write the role of ADH in formation of Urine.
- 21 What is monosynaptic reflex? Explain it with suitable example with the help of a diagram?
- 22 Discuss protein synthesis with a diagram.

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Code No. 13233 / PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Main & Backlog) Examination, August 2019**

**Subject : Computer Applications in Pharmacy**

**Time : 2 Hours**

**Max. Marks: 50**

**Note: Answer two questions Part – A any six questions from Part – B.**

**PART – A (2x10=20 Marks)**

**Answer any Two of the following:**

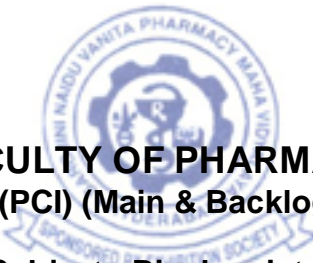
- 1 What is number system? Write Binary to Decimal conversion and Decimal to Binary conversion. (10)
- 2 Write a note on Drug information storage and discuss briefly about applications of computer in Dispensing of Drugs. (10)
- 3 (a) Write a note on web servers and server products. (5)  
(b) Write about MS-ACCESS. (5)

**PART – B (6x5=30 Marks)**

**Answer any Six of the following:**

- 4 What is HTML? Application of HTML.
- 5 How to plan and manage the New Project?
- 6 What is the importance of Drug Database system in MYSQL
- 7 What is the importance of Clinical studies?
- 8 Write a short notes on Bioinformatics.
- 9 Explain chromatographic data analysis system.
- 10 Explain Text Information Management System.
- 11 Explain Electronic prescribing and Discharging system.

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Code No. 13231 / PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Main & Backlog) Examination, July 2019**

**Subject : Biochemistry**

**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 (10x2=20 Marks)**

- 1 Define glycolysis and gluconeogenesis.
- 2 Write the functions of cholesterol.
- 3 What are coenzymes?
- 4 Differentiate between DNA & RNA.
- 5 What is substrate level phosphorylation?
- 6 Define and classify carbohydrates.
- 7 Write a note on phenyl ketonuria.
- 8 What are essential and non-essential amino acids? Give two examples of each.
- 9 Explain in brief G6PD deficiency.
- 10 Give biological significance of Lipids.

**PART – B (2x10=20 Marks)**

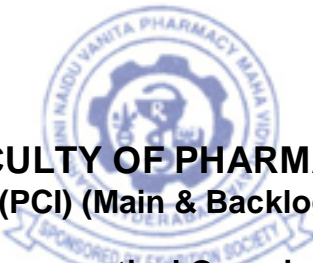
- 11 Write an essay on electron transport chain and oxidative phosphorylation. (10)
- 12 What are enzymes? Mention their IUB classification? Write a note on factors affecting enzyme action. (10)
- 13 Discuss the biosynthesis of purine nucleotide. (10)

**PART – C (7x5=35 Marks)**

- 14 Explain in brief,  $\beta$ -oxidation of fatty acids.
- 15 Write a note on clinical applications of enzymes.
- 16 Discuss Urea cycle.
- 17 Explain the physiological importance of pentose phosphate pathway.
- 18 Discuss about energy rich compounds and redox potential.
- 19 Write a note on conversion of cholesterol to bile acids.
- 20 Describe RNA synthesis.
- 21 Write a note on ketogenesis.
- 22 Discuss TCA cycle in brief.

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**SNVPMV Library**



Code No. 13230 / PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Main & Backlog) Examination, July 2019**

**Subject : Pharmaceutical Organic Chemistry – I**

**Time : 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions Part – A, any two questions from Part – B and any five question from Part – C.**

**PART – A (10x2=20 Marks)**

- 1 Define Isomerism. Give some examples.
- 2 Write the structure of the following organic compounds.  
(a) 3, 4-dibromo-1-butene (b) 2 – butyne
- 3 Write any two preparation methods of Paraffins.
- 4 Write the structure and use of (a) Dichloromethane (b) Glycerol
- 5 What is a carbocation? How it is formed?
- 6 Write the increasing order of acidity of the following  
Cl CH<sub>2</sub> COOH, Cl<sub>2</sub> CH COOH, F CH<sub>2</sub> COOH
- 7 Explain any two qualitative tests for carboxylic acids.
- 8 Write the structure and uses of paraldehyde and salicylic acid.
- 9 Define electrophile and nucleophile with examples.
- 10 What is diazotization reaction?

**PART – B (2x10=20 Marks)**

- 11 (a) Explain the mechanism and stereochemistry of SN<sup>2</sup> reaction. (3+3)  
(b) Explain any two tests used to differentiate primary, secondary and tertiary alcohols. (4)
- 12 (a) Explain the mechanism involved in aldol condensation. (5)  
(b) Write a short note on stability of conjugated dienes. (5)
- 13 (a) Explain the qualitative tests used to detect carbonyl compounds. (6)  
(b) Write the structure and uses of (a) citric acid (b) methyl salicylate (4)

**PART – C (7x5=35 Marks)**

- 14 Explain the mechanism of free radical substitution reaction of alkanes.
- 15 Write a short note on basicity of amines.
- 16 Explain Perkin condensation.
- 17 Write the preparation methods of aldehydes.
- 18 Write the product of the following reaction and explain  
CH<sub>3</sub> – CH = CH<sub>2</sub> + HBr → ?
- 19 Write the differences between substitution and elimination reactions.
- 20 Write the qualitative tests of esters.
- 21 Explain anti-Markovnikoff's rule.
- 22 Explain the mechanism of crossed Cannizaro reaction.

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Code No. 13229/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Sem. (PCI) (Main & Backlog) Examination, July 2019**

**Subject: Human Anatomy and Physiology - II**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all Questions from Part – A, and Two questions from Part – B, and any Seven questions from Part – C.**

**PART – A (10 X 2 = 20)**

1. Describe the structure of spinal cord.
2. Write about the formation of bile salts.
3. Mention kidney function tests. What is the importance of serum creatine?
4. What are the hormones secreted by adrenal gland? What are their actions?
5. Brief about pulmonary ventilation.
6. Write a note on mechanism of hormones.
7. Write the function of pineal gland.
8. Briefly explain about nerve action potential.
9. Give a note on chromosomes.
10. Which chromosome determines the sex?

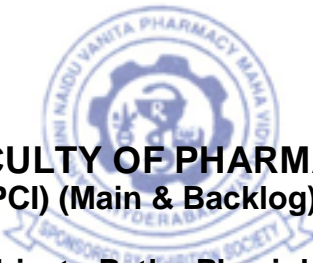
**PART – B (2 x 10 = 20)**

- 11.(a) Explain the mechanism involved in the formation of concentrated urine. 7  
(b) Brief up about artificial respiration. 3
- 12.(a) Write a detail note on pituitary gland and its hormones. 6  
(b) Give a short note on hypothalamic hormones and its homeostasis with pituitary hormone. 4
- 13.(a) Give the summary of digestion of carbohydrates, lipids, proteins in GIT. 7  
(b) Write the formation of ATP. 3

**PART - C (7 x 5 = 35)**

14. Give a note on hypothalamus.
15. Discuss about the role of Boyels law in respiration.
16. Write a note on physiology of urine formation.
17. Explain the function of pancreatic juice in the process of digestion.
18. Discuss about calcium homeortasi by the endocrine system using a diagram.
19. Write a note on peristalsis in GIT.
20. Explain RAS (Renin Angiotensin aldosterone pathway) pathway in regulation of kidney functions.
21. Write about parturition and role of different hormones involved.
22. Give a note on spermatogenesis with suitable diagram.

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Code No. 13232 / PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II-Semester (PCI) (Main & Backlog) Examination, August 2019**

**Subject : Patho Physiology**

**Time : 3 Hours**

**Max. Marks: 75**

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

**PART – A (10x2=20 Marks)**

- 1 What are T-lymphocytes and their functions?
- 2 What is calcification?
- 3 What are peptic ulcers?
- 4 Mention different types of Hepatitis.
- 5 Name the types of STD's with their causative agents.
- 6 Write different types of angina pectoris in briefly.
- 7 Define the terms Metaplasia and Hyperplasia.
- 8 Differentiate mania and depression.
- 9 Enumerate different types of anaemia.
- 10 Explain scar formation in tissue repair.

**PART – B (2x10=20 Marks)**

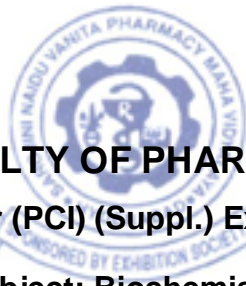
- 11 Write the pathogenesis of Diabetes mellitus in detail. (10)
- 12 (a) Explain the pathogenesis of HIV infection. (6)  
(b) Write a note on Hemophilia. (4)
- 13 Enumerate the cellular events in inflammation in detail. (10)

**PART – C (7x5=35 Marks)**

- 14 Write about pathogenesis of acute renal failure.
- 15 What is hepatitis? Explain different types of hepatitis.
- 16 Explain the basic principles in wound healing.
- 17 Write a note on meningitis.
- 18 Discuss the etiopathogenesis of Parkinson's disease.
- 19 Explain the pathogenesis of Congestive heart failure.
- 20 Write a note on syphilis.
- 21 What are different types of feedback systems and explain in briefly?
- 22 Discuss the pathogenesis of hypertension.

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**SNVPMV Library**



Code No. 13100/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II – Semester (PCI) (Suppl.) Examination, February 2019**

**Subject: Biochemistry**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

**PART – A (10X2 = 20 Marks)**

1. What is a carbohydrate and its function in human body?
2. What are energy rich compounds?
3. What are lipids and their function in human body?
4. What are Glycogen storage disease (GSD)?
5. What is Albinism and phenylketonuria?
6. What is Ketoacidosis?
7. What is enzyme inhibition?
8. Define Isoenzymes with examples.
9. What is Jaundice and its symptoms?
10. Define Transcription and Translation.

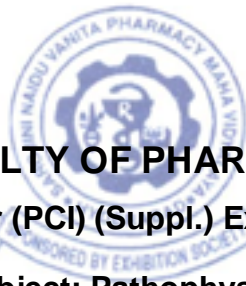
**PART – B (2X10 = 20 Marks)**

11. (a) What is Diabetes mellitus (3)  
(b) Write about HMP shunt Pathway and significance (7)
- 12 (a) Write a note on Factors effecting Enzyme activity (7)  
(b) Explain Coenzymes with biochemical functions (3)
- 13 (a) Write a note on lipid metabolism (4)  
(b) Explain various lipid metabolism Disorders (6)

**PART – C (7X5 = 35 Marks)**

14. Explain about DNA replication.
15. Write a note on conversion of Cholesterol into bile acids and its biological significance.
16. Write about catabolism of Heme.
17. Write in detail about oxidation of saturated fatty acids.
18. Write short note on IUB system of classification of enzymes with examples.
19. Write short note on classification of carbohydrates and their biological significance.
20. Explain about Gluconeogenesis pathway and significance.
21. Write about Oxidative phosphorylation with mechanism.
- 22 Write about biosynthesis of pyrimidine nucleotides.

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Code No. 13101/PCI

## FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI) (Suppl.) Examination, February 2019

Subject: Pathophysiology

Time: 3 Hours

Max. Marks: 75

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

### PART – A (10X2 = 20 Marks)

1. Define cell injury
2. What causes arthritis?
3. Define the following.
  - a) Angina pectoris
  - b) Congestive heart failure
4. Mention the parts of heart.
5. What is the role of mast cells in asthma?
6. Mention the types of anaemia.
7. What are the causes of the chronic renal failure?
8. Distinguish between exocrine and endocrine gland.
9. What are the signs and symptoms of peptic ulcer.
10. What is the cause of jaundice?

### PART – B (2X10 = 20 Marks)

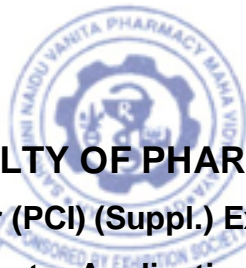
11. Define cell injury. Explain the mechanisms of cell injury.
12. What is hypertension? Explain the pathophysiology of hypertension.
13. Discuss neural basis of epilepsy. Add a note on types of epilepsies.

### PART – C (7X5 = 35 Marks)

14. Explain the role of various chemical mediators of inflammation.
15. Explain briefly about hyperplasia.
16. Describe the pathophysiology of thalassemia
17. What is ischemic heart disease? Explain its types.
18. Discuss the pathogenesis of bronchial asthma.
19. Write a note on hypo and hyperthyroidism.
20. What is Alzheimer disease? Enumerate its signs and symptoms.
21. What are peptic ulcers? Discuss pathophysiology.
22. Describe the causes and symptoms of AIDS.

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Code No. 13102/PCI

## FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI) (Suppl.) Examination, February 2019

Subject: Computer Applications in Pharmacy

Time: 2 Hours

Max.Marks: 50

Note: Answer any two questions from Part – A and any six questions from Part – B.

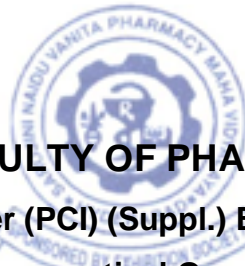
### PART – A (10x2 = 20 Marks)

- 1 Explain different number systems used in computer's (binary, decimal, octal, hexadecimal).
- 2 Describe about laboratory information management system.
- 3 Write about XML.

### PART – B (6x5 = 30 Marks)

- 4 Explain the concept of data flow diagrams.
- 5 Discuss about web servers and server products.
- 6 Differentiate hospital and clinical pharmacy.
- 7 Discuss about databases of bioinformatics.
- 8 Write about electronic prescribing and discharge systems.
- 9 Explain about HTML.
- 10 Write a note on biological databases.
- 11 What are objectives of bioinformatics?

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Code No. 13099 / PCI

## FACULTY OF PHARMACY

B. Pharmacy II Semester (PCI) (Suppl.) Examination, February 2019

Subject: Pharmaceutical Organic Chemistry – I

Time: 3 Hours

Max. Marks: 75

Note: Answer all questions from Part- A, Any two questions from Part – B and Any seven questions from Part – C.

**PART – A (10 x 2 = 20 Marks)**

Answer ALL questions. All questions carry equal marks.

- Define the following terms with examples.
  - Aromatic compounds
  - Functional group
- Write the common name and IUPAC name for the following structures.
  - $$\text{H}_3\text{C} - \text{CH}_2 - \underset{\text{CH}_3}{\text{CH}} - \text{CHO}$$
  - $$\text{H}_3\text{C} - \text{CH}_2 - \text{O} - \text{CH}_2 - \text{CH}_3$$
- Give an example for a cis and trans isomer.
- Write the structures and uses of any two carboxylic acid compounds.
- Classify alcohols with relevant examples.
- Explain the significance of Tollen's test.
- Write the structure and uses of acetone and hexamine.
- Write the structure uses of benzoic acid and acetyl salicylic acid.
- What is an amine? Give structures and uses of any two amines.
- Write the structures and uses of ethyl alcohol and glycerol.

**PART – B (2 x 10 = 20 Marks)**

Answer any TWO questions. All questions carry equal marks.

- Define 'isomerism'. Explain various types of structural isomerism with relevant examples. 10
- Differentiate between  $\text{SN}^1$  and  $\text{SN}^2$  reactions and discuss their mechanisms with examples. 10
- Explain the mechanism involved in aldol condensation and mention about crossed-aldol condensation. 10

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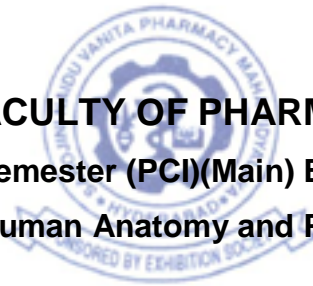


**PART – C (7x 5 = 35 Marks)**

**Answer any SEVEN questions. All questions carry equal marks.**

- 14 Explain the IUPAC rules for alkenes with suitable examples.
- 15 Explain the 1,2 / 1,4-addition reactions of alkadienes.
- 16 Write any two methods for synthesis of alkyl halides with suitable examples.
- 17 How do you distinguish among primary, secondary and tertiary alcohols based on chemical reactions?
- 18 Explain the mechanism involved in nucleophilic addition reactions of carbonyl compounds. Give any two examples.
- 19 Write any two qualitative tests of carbonyls.
- 20 Write the preparation of esters and amides with suitable examples.
- 21 Explain the Hinsberg method of separation of amines.
- 22 Explain in detail about stability of conjugated dienes.

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Code No. 1225 / PCI

## FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI)(Main) Examination, July 2018

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 and any seven questions from Part-C.**

### PART – A (10x2 = 20 Marks)

**Answer all questions. All questions carry equal marks.**

- 1 Write a note on role of pepsin in digestion.
- 2 What are the various neurotransmitters?
- 3 Mention the physiological significance of BMR.
- 4 What is artificial respiration?
- 5 Enlist the hormones of pancreas with their function.
- 6 List out the functions of DNA.
- 7 Name few disorders of kidney.
- 8 What are the functions of female reproductive system?
- 9 Discuss the role of ATP in biological system.
- 10 Explain the disorders related to thyroid gland.

### PART – B (2x10 = 20 Marks)

**Answer any two questions. All questions carry equal marks.**

- 11 Discuss the anatomy and functions of GI tract with a neat labelled diagram.
- 12 Discuss the anatomy and functions of kidney with a neat labelled diagram.
- 13 a) Write a note on various respiratory centers.  
b) Add a note on lung volumes and capacities of spirogram with a neat labelled diagram.

### PART – C (7x5 = 35 Marks)

**Answer any seven questions. All questions carry equal marks.**

- 14 Define reflex action. Add a note on various components of reflex arc.
- 15 Explain the various parts of brain with a labelled diagram.\
- 16 Write a note on physiology of urine formation.
- 17 Write a note on a role of RAS in kidneys.
- 18 What are the various evaluation techniques used to know the kidney functions?
- 19 Write a note on anatomy of male reproductive system.
- 20 Write in detail about Oogenesis.
- 21 What are the hormones secreted by pituitary gland and their functions.
- 22 Explain the genetic pattern of inheritance.

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Code No. 1228 / PCI

## FACULTY OF PHARMACY

**B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018**

**Subject: Computer Applications in Pharmacy**

**Time: 2 Hours**

**Max.Marks: 50**

**Note: Answer any two questions from Part – A & any six questions from Part – B.**

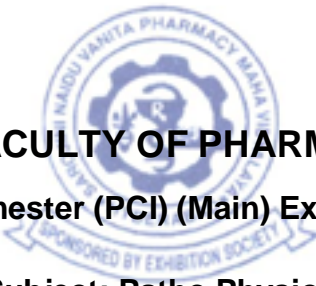
### **PART – A (10x2 = 20 Marks)**

- 1 What is a number system? Convert binary number into decimal, octal, hexadecimal and vice versa with example.
- 2 Describe any 10 HTML tags
- 3 Write about electronic prescribing and discharge system.

### **PART – B (6x5 = 30 Marks)**

- 4 Write a note on Web servers and server products.
- 5 what is database? Explain about MS Access database.
- 6 Write about diagnostic and lab-diagnostic system.
- 7 Write a note on data flow diagrams.
- 8 Explain the concept of chromatographic data analysis.
- 9 Discuss about applications of computers in pharmacy.
- 10 Illustrate text information management system.
- 11 Write about XML.

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Code No. 1230/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018**

**Subject: Patho Physiology**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

**PART – A (10X2 = 20 Marks)**

1. What are the patterns of cell death?
2. Define the following:  
(a) Hyperplasia (b) Atrophy
3. What is diabetes? How it is caused?
4. Differentiate between asthma and COPD.
5. Define Angina pectoris and congestive heart failure.
6. Explain the pathophysiology of Parkinson's disease.
7. What are the causes of hepatitis B?
8. Define osteoporosis and osteoarthritis.
9. What is neoplasm? List out the types of neoplasm's.
10. What is meningitis and it's symptoms?

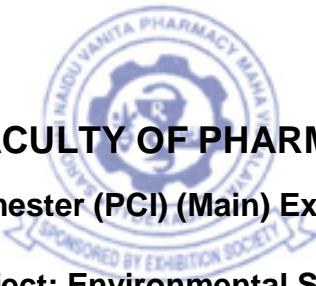
**PART – B (2X10 = 20 Marks)**

11. Write briefly about the principle of wound healing in the skin.
12. Describe the reversible and irreversible cell injury
13. Discuss the pathophysiology of any one disease.

**PART – C (7X5 = 35 Marks)**

14. Define hypertension. Explain the factors affecting it.
15. What is anaemia? Classify various types of anemia.
16. Discuss the pathogenesis of bronchial asthma.
17. What is Parkinson's disease? Enumerate its signs and symptoms.
18. What are sex hormones? Discuss any one sex hormone disorder.
19. Define gout? Discuss its causes and symptoms.
20. Explain etiology and pathogenesis of schizophrenia.
21. Define inflammation. Explain the causes of chronic inflammation.
22. What are the causes of liver cirrhosis?

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Code No. 1229/PCI

## FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018

Subject: Environmental Sciences

Time: 2 Hours

Max. Marks: 50

**Note: Answer two questions from Part – A, Any six questions from Part – B.**

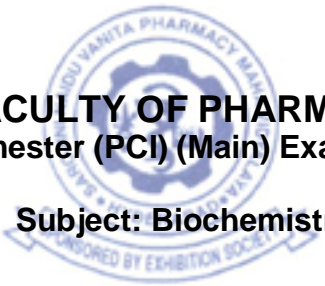
### PART – A (2X10 = 20 Marks)

1. Classify the different types of forests. What are the resources that we get from forest.
2. Explain the different aquatic ecosystems. Explain each one in detail.
3. Classify the natural resources. Briefly explain each one.

### PART – B (6X5 = 30 Marks)

4. Define ecosystem. What is the structure of an ecosystem?
5. Briefly explain the reasons for water stress.
6. Explain the different desert ecosystems.
7. What are the causes of air pollution?
8. What are the different mineral resources? List and give the uses of some minerals.
9. Why land is considered as a natural resource? What is weathering?
10. Explain the different grass land ecosystems.
11. What are the different energy resources? Explain any two in detail.

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Code No. 1227/PCI

**FACULTY OF PHARMACY**  
**B. Pharmacy II – Semester (PCI) (Main) Examination, August 2018**

**Subject: Biochemistry**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part – A, Any two questions from Part – B and any Seven questions from Part - C.**

**PART – A (10X2 = 20 Marks)**

1. What is a Carbohydrate and its function in human body?
2. What are glycogen storage disease?
3. Define protein and write its functions in human body
4. What is atherosclerosis.
5. What are energy rich compounds?
6. What is a genetic code?
7. Define Enzyme induction.
8. Define coenzymes with biochemical functions.
9. What is jaundice and its symptoms?
10. Define De novo synthesis of fatty acids..

**PART – B (2X10 = 20 Marks)**

11. (a) Write about the biological significance of ATP and cyclic AMP (3)  
(b) Write about Citric acid cycle pathway, energetics and significance (7)
- 12 Write a note on lipid metabolism. Explain various lipid metabolism disorders (10)
- 13 (a) Explain about amino acid metabolism (5)  
(b) Write about Urea cycle and its disorders (5)

**PART – C (7X5 = 35 Marks)**

14. Explain about Electron transport chain (ETC) and its mechanism.
15. Write a note on Transamination and deamination of amino acid metabolism
16. Write about catabolism of purine nucleotides.
17. Write in detail about  $\beta$  Oxidation of saturated fatty acids.
18. Write a short note on Enzyme inhibitors with examples.
19. Write a short note on hormonal regulation of Blood Glucose levels and Diabetes mellitus.
20. Explain about hyperbilirubinemia and jaundice.
21. Write about Glycolysis pathway, energetic and significance.
22. Explain about diagnostic and therapeutic applications of enzymes and isoenzymes.

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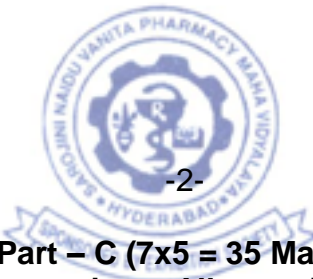

**FACULTY OF PHARMACY**
**B. Pharmacy II-Semester (PCI) (Main) Examination, August 2018**
**Subject: Pharmaceutical Organic Chemistry – I**
**Time: 3 Hours**
**Max. Marks: 75**
**Note: Answer all questions from Part- A, Any two questions from Part – B and Any seven questions from Part – C.**
**PART – A (10 x 2 = 20 Marks)**
**Answer ALL questions. All questions carry equal marks.**

- 1 Define the following terms with examples:
  - a) Aliphatic compounds
  - b) Aromatic compounds.
- 2 Write the common name and IUPAC name for the following structures.
  - a) 
$$\begin{array}{c} \text{O} \\ || \\ \text{H}_3\text{C} - \text{CH}_2 - \text{CH} - \text{C} - \text{OH} \\ | \\ \text{CH}_3 \end{array}$$
  - b) 
$$\begin{array}{c} \text{O} \\ || \\ \text{H}_3\text{C} - \text{CH}_2 - \text{C} - \text{CH}_3 \end{array}$$
- 3 Write the structures and uses of any two aldehydes or ketones.
- 4 What is a carbocation? Give two examples.
- 5 Write the structure and uses of benzoic acid and salicylic acid.
- 6 Write the general structures of an amide and an ester by giving examples.
- 7 What is hybridization.
- 8 Explain the significance of esterification test.
- 9 Aliphatic amines are more basic than aromatic amines. Justify.
- 10 What is an electrophile? Give examples.

**PART – B (2x10 = 20 Marks)**
**Answer any TWO questions. All questions carry equal marks.**

- 11 a) Differentiate between Markovnikov's and Anti-Markovnikov's addition of alkenes. 5  
 b) Write about addition reactions of dienes. 5
- 12 What are alkyl halides? Give examples. Discuss the  $\text{SN}_1$  and  $\text{SN}_2$  reactions and mechanism with examples. 10
- 13 Discuss about various reactions (minimum 5) of aldehydes and ketones with examples. 10

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**Part – C (7x5 = 35 Marks)**

**Answer any SEVEN questions. All questions carry equal marks.**

- 14 Write the IUPAC rules for nomenclature of carbonyls compounds (aldehydes & ketones) with examples.
- 15 Write the structures and uses of any five alcohol compounds.
- 16 Describe the mechanism involved in halogenation of alkanes with special emphasis on chlorination of propane.
- 17 Give a note on oxidation of alcohols.
- 18 Write the structure, IUPAC name and uses of chloroform and tetrachloroethylene.
- 19 Write any two methods of preparation for each of aldehydes and ketones.
- 20 Explain the mechanism involved in cannizzaro reaction with examples.
- 21 Classify amines with examples and give the structures and uses of any two amine compounds.
- 22 Explain the acidity of carboxylic acids with special emphasis on effect of substituent on their acidity.

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