

Code:6276/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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**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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**FACULTY OF PHARMACY**  
**B. Pharmacy II-Semester (PCI)(Main & Backlog)Examination,**  
**November 2020**

**Subject: Pharmaceutical Organic Chemistry - I**

**Time : 2 Hours**

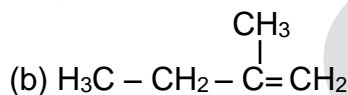
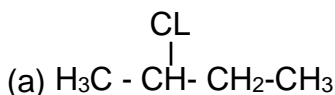
**Max. Marks: 75**

**PART – A**

**Note: Answer Seven Questions.**

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

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



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

**PART – B**

**Note: Answer One Question.**

**(1X14 = 14 Marks)**

- Define 'isomerism'. Explain various types of structural isomerism with examples.
- (a) Write any two methods of preparation of alkylhalides.  
 (b) Explain  $\text{SN}_2$  reactions of alkyl halides giving special emphasis on Walden inversion.
- Explain the mechanism involved in aldol condensation and crossed-aldol condensation with relevant examples.

**PART – C**

**Note: Answer Five Question. (5X8 = 40 Marks)**

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

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**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.

**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.

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**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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**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.

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**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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**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 tropic 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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**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)**

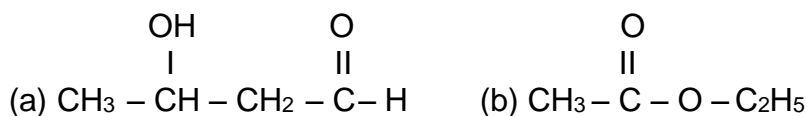
4. Define HTML and XML? Difference between HTML and XML.
5. Explain the project process life cycle.
6. Explain drug information storage and retrieval system.
7. What are the importances of clinical studies?
8. Write a short note on Bioinformatics Databases.
9. Explain laboratory information management 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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**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.



- 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 SN<sup>1</sup> and SN<sup>2</sup> 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)**

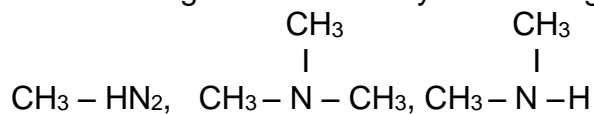
- 11 (a) Explain the mechanism and stereochemistry of SN<sup>1</sup> and reaction. (6)  
(b) Write the factors affecting nucleophilic substitution reaction. (4)
- 12 (a) Explain the mechanism of Cannizaro reaction. (5)  
(b) Write about 1, 2, - addition and 1, 4 – addition of conjugated dienes. (5)
- 13 What is E<sub>2</sub> reaction? Explain its mechanism. Explain the evidences of E<sub>2</sub> 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

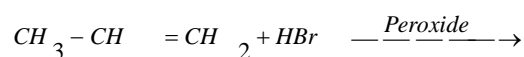
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17 Write the increasing order of basicity of following amines and justify



18 Explain the mechanism of electrophilic addition reactions of alkenes.

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



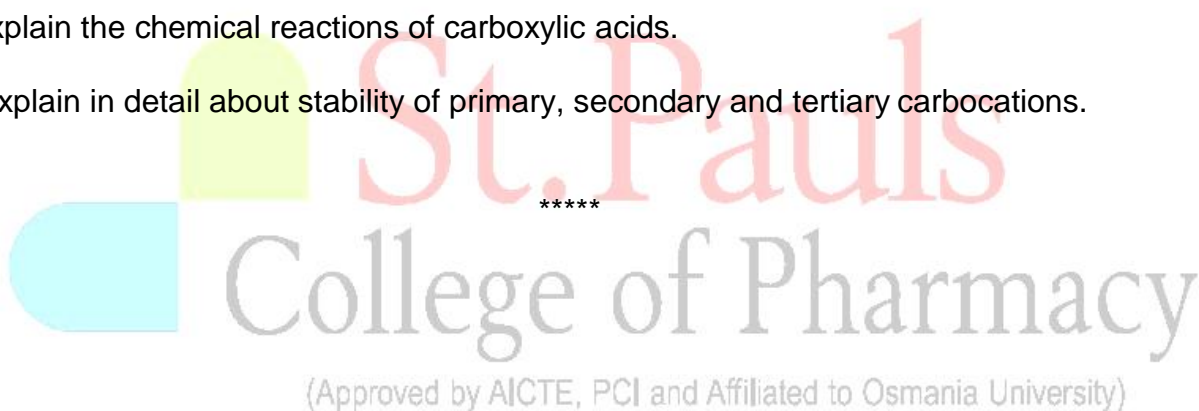
20 Write the structures and uses of :

(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.



**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)

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**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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**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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**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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**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  
 $\text{CH}_3 - \text{CH} = \text{CH}_2 + \text{HBr} \longrightarrow ?$
- 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.

**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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**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.



**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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**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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**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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## FACULTY OF PHARMACY

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

Subject: Pharmaceutical Organic Chemistry – I

Time: 3 Hours

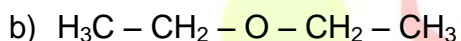
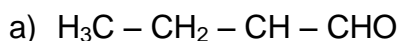
Max. Marks: 75

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.



- 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.

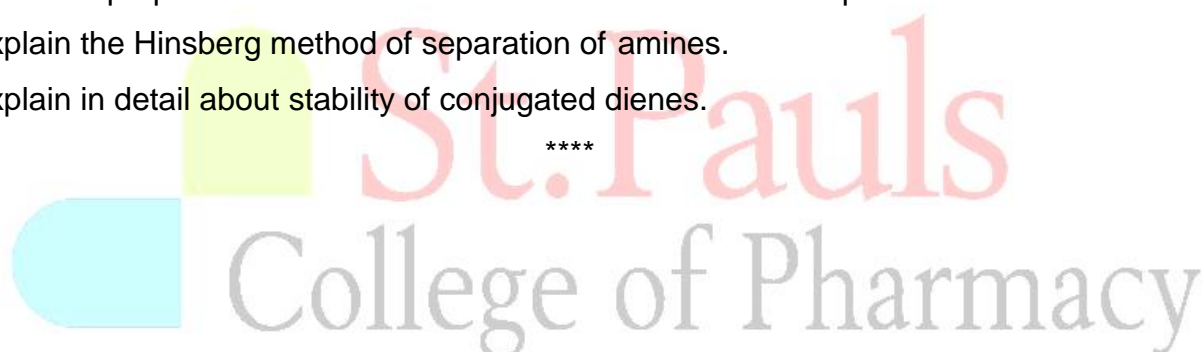
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|--|----|
| 11 Define 'isomerism'. Explain various types of structural isomerism with relevant examples.                   | 10 |
| 12 Differentiate between $\text{SN}^1$ and $\text{SN}^2$ reactions and discuss their mechanisms with examples. | 10 |
| 13 Explain the mechanism involved in aldol condensation and mention about crossed-aldol condensation.          | 10 |

**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 spirometry with a neat labelled diagram.

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**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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## 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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**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 its 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?



**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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**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 aminoacid 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

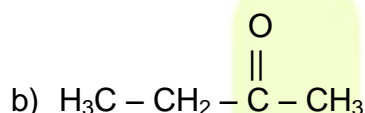
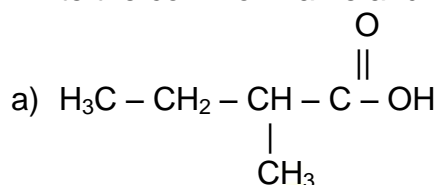
Max. Marks: 75

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.



- 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. (Approved by AICTE, PCI and Affiliated to Osmania University)
- 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

**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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