

Code. No. B122426



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**B.Pharmacy II Semester (PCI) (Supply) Examination Dec / Jan 2024-25**

**Subject: Environmental Sciences & BP206T**

**Time: 2 Hours**

**Max.Marks: 50**

**PART- A**

**Note: Answer ANY TWO questions**

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

Q.No.	Question	CO	BL
1	Present Aquatic system in detail	2	3
2	Write renewable and non-renewable energy resources? Compare the advantages and disadvantages of these resources	1	4
3	Discuss about soil pollution, its effect on food and health. Investigate the measures to prevent Soil pollution.	5	5

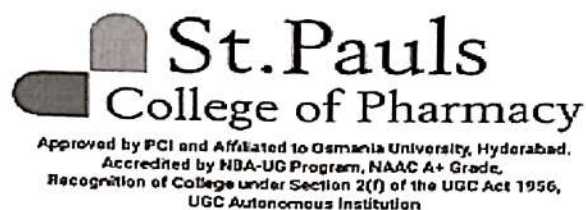
**PART B**

**Note: Answer any SIX questions**

**(6 x 5= 30 Marks)**

Q.No.	Question	CO	BL
4	Illustrate the biotic and abiotic components of an ecosystem with suitable examples	3	4
5	Outline the structure and functions of forest ecosystem	3	4
6	Examine the different resources of water?	2	4
7	Assess the economic importance of mineral resources	2	5
8	List any five sources of air pollution	4	
9	Classify different types of deserts? Explain the adaptation of plants and animals for desert life.	3	3
10	Recall the functions of food? Present a note on the world food problems?		3
11	Describe the different energy resources? Explain any two in detail.	2	3

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**B.Pharmacy II Semester (PCI) (Supply) Examination Dec /Jan 2024-25**

**Subject: COMPUTER APPLICATIONS IN PHARMACY & BP205 T**

**Time: 2 Hours**

**Max.Marks: 50**

**PART- A**

**Note: Answer any TWO questions**

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

Q.No.	Question	CO	BL
1	Explain briefly about Laboratory Information management system.	5	2
2	Discuss the impact of Bioinformatics in Vaccine discovery.	4	5
3	How computers are employed in Hospital and Clinical Pharmacy?	3	3

**PART B**

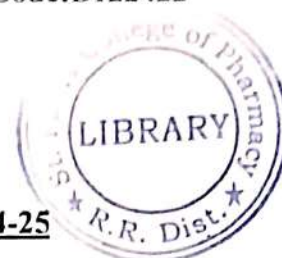
**Note: Answer any SIX questions**

**(6 x 5 = 30 Marks)**

Q.No.	Question	CO	BL
4	Summarize the usage of Electronic Prescribing and discharge (EP) systems.	5	2
5	Detailed description on Hexadecimal number systems.	1	2
6	Explain in detail about Patient monitoring system.	3	1
7	Discuss in brief among any two web technologies	2	3
8	Write a note on concept of input/output design in soft wares.	2	6
9	How TIMS is useful as data analytical tool in preclinical development	5	3
10	Classify programming Languages	2	3
11	Give outline on MS ACCESS	2	4

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**B. Pharmacy II Semester (PCI) (Supply) Examination Dec/ Jan 2024-25**

**Subject & Code: Pharmaceutical Organic Chemistry-I & BP202T**  
**Time: 3 Hours** **Max Marks: 75**

**PART-A**

**Note: Answer ALL Questions**

**(10x2= 20 Marks)**

Q. No	Question	CO	BL
1	Write the IUPAC name and structure of Isovaleric acid.	1	1
2	Define Isomerism. Write the positional isomer of 1- Butene.	2	2
3	Write the structure and uses of a) Ethyl alcohol b) Formaldehyde.	1	1
4	What is Lucas test? Give its significance.	5	1
5	Define Saytzeff's rule. Give an example.	4	1
6	Write the metamer of a) 3 Pentanone b) Ethoxy propane	2	2
7	Complete the reaction and write the IUPAC name of the product Ethanol + Propanoic acid + Sulphuric acid ----->	3	3
8	Complete the reaction and write the IUPAC name of the product Propene + Mercuric acetate + Sodiumborohydride----->	3	3
9	Arrange the following carboxylic acids in the increasing order of their acidity and give reason. a) Acetic acid b) Fluoro acetic acid c) Bromo acetic acid d) Chloro acetic acid	4	4
10	Arrange the following compounds in the increasing order of their stability and give reason. a) 2- Methyl 2- Pentene b) 2,3-Dimethyl 2-Pentene c) 1- Pentene d) 2- Pentene	4	5

**PART B**

**Note: Answer any TWO Questions**

**(2x10= 20 Marks)**

Q. No	Question	CO	BL
11	Write the mechanism in detail when 2 Methyl 2 Butene is treated with a) Hydrogen Bromide gas b) Hydrogen Bromide gas in presence of peroxide. Write the structure of the major product formed with its IUPAC name. State the rules governing the above two reactions.	3	2
12	Explain in detail a) Aldol Condensation b) Acidity of carboxylic acids and factors affecting the acidity	6 4	1 2
13	Explain the mechanism of the following with an example a) Characteristic reactions of alkanes b) Esterification of carboxylic acids.	3	1

**PART C**

**Note: Answer any SEVEN Questions**

**(7x5= 35 Marks)**

Q. No	Question	CO	BL
14	Explain inductive effect.	4	2
15	Write short notes on Benzoin condensation.	6	1
16	What are the qualitative tests for alcohols?	5	1
17	Explain the stability of Carbocations.	4	1
18	Write the IUPAC system of nomenclature of carbonyl compounds.	1	1
19	Write any five preparations of alkenes.	3	1
20	Write the Grignard synthesis of alcohols.	3	2
21	Write short notes on heat of hydrogenation.	4	2
22	Write the structure and uses of a) Chloroform b) Vanillin	1	1



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## **B.Pharmacy II Semester (PCI) (Supply) Examination Dec/ Jan 2024-25**

**Subject: HUMAN ANATOMY AND PHYSIOLOGY II & BP201T**

**Time: 3 Hours**

**Max.Marks: 75**

### **PART- A**

**Note: Answer ALL questions**

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

Q.No.	Question	CO	BL
1	Classify different neurons and name cholinergic neurotransmitters	2	3
2	Mention the function of brain	2	4
3	write the functions of afferent and efferent nerve tracts	2	5
4	Explain sleep as specialized function of brain	2	4
5	Write a note on properties composition and function of pancreatic juice	2	5
6	Define ganglion	2	5
7	Define goiter	2	5
8	Write a note on testosterone	2	5
9	Write a note on spermatogenesis process in testes	2	5
10	Describe renal autoregulation and glomerular filtration rate	2	5

### **PART B**

**Note: Answer any TWO questions**

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

Q.No.	Question	CO	BL
11	Discuss structure and function of cerebellum and spinal cord	10	6
12	Describe the process of oogenesis and follicular development	10	6
13	Describe the anatomical and physiological basis of counter current mechanism in kidney	10	5

### **PART C**

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

Q.No.	Question	CO	BL
14	Write a note on meninges of brain	5	4
15	Explain the following forms of a. cell signaling contact dependent, b. paracrine, c. synaptic and d. endocrine	5	3
16	Explain the mechanism of secretion of hydrochloric acid in stomach	5	5
17	Describe the anatomy of lungs with a neat labelled diagram	5	6
18	Describe the various movements of thoracic cage and lung during respiration	5	2
19	Describe the role of kidney in maintaining acid bas balance	5	4
20	Write a note on fertilization , oogenesis and chromosomes	5	2
21	Discuss physiological action of glucocorticoids	5	2
22	Discuss the functions of hormone by giving suitable examples. How is the secretion of oxytocin is regulated	5	4




**B.Pharmacy II Semester (PCI) (Supply) Examination Dec / Jan 2024-25**
**Subject: BIOCHEMISTRY & BP203T**
**Time: 3 Hours**
**Max.Marks: 75**
**PART- A**
**Note: Answer ALL questions**
**(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Define & classify carbohydrates.	1	1, 2
2	What is a genetic code	2	1
3	Explain in brief G6PD deficiency.	2	2
4	Define Transamination & Deamination.	3	1
5	What are coenzymes	2	1
6	Define glycolysis and gluconeogenesis	1	1
7	What are essential and non-essential amino acids? Give two examples of each	1	1
8	Explain biological significances of ATP and cyclic AMP	1	2
9	What are Isoenzymes & allosteric enzymes	2	1
10	Give biological significance of Lipids.	5	3

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

Q.No.	Question	CO	BL
11	Discuss the Bio synthesis of Pyrimidine Nucleotide	5	2
12	Write an essay on electron transport chain & oxidative phosphorylation	3	1
13	Describe citric acid cycle and glycogenesis pathway	2	2

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

Q.No.	Question	CO	BL
14	Explain about DNA replication	2	2
15	Describe Protein synthesis process in detail	1	2
16	Write biological role and classification of amino acids with examples.	2	1
17	Write short note on IUB system of classification of enzymes with examples.	2	1
18	Write a note on Enzyme inhibition	6	1
19	Describe RNA synthesis	2	2
20	Explain Oxidative phosphorylation and its mechanism	4	2
21	Write a note on ketogenesis	2	1
22	Write a note on conversion of cholesterol into Vitamin D.	3	1

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## B.Pharmacy II Semester (PCI) (Main) Examination Jul/Aug 2024

**Subject & Code: HUMAN ANATOMY AND PHYSIOLOGY-II & BP201T**

**Time: 3 Hours**

**Max.Marks: 75**

### PART- A

**Note: Answer ALL questions**

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

Q.No.	Question	CO	BL
1	Define synapse and mention the different neurotransmitters.		1
2	Explain the following a. action potential b. hyperpolarization.	1	2
3	Explain the structure and function of parasympathetic nervous system.	1	2
4	Write a note on thymus gland.	1	1
5	Discuss BMR.	2	2
6	Describe Disorders of Kidney.	4	2
7	Write a note on functions of liver.	2	3
8	Write a note on micturition reflex.	4	3
9	Define Pineal gland.	2	1
10	Explain the term DNA, Gene chromosome, Nucleosome.	6	2

### PART B

**Note: Answer any TWO questions**

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

Q.No.	Question	CO	BL
11	Describe the neurohumoral regulation of acid secretion in stomach and write a note on peptic ulcers.	2	2
12	Discuss the function of DNA and write a note on genetic inheritance.	6	2
13	Explain the structure and functions of pituitary gland.	5	2

### PART C

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

Q.No.	Question	CO	BL
14	Describe the structure of reflex arc.	1	2
15	Explain ventricles of brain.	1	2
16	Explain how respiratory areas control respiration.	3	2
17	Describe the parts of female reproductive system.	6	2
18	Give a note on the role of RAS system in kidney functions.	4	2
19	Explain the structure of thyroid gland.	5	2
20	Enlist the functions of liver and gall bladder.	2	1
21	Describe the Anatomy and functions of alveoli.	3	2
22	Write a note on lung volumes and lung capacity.	3	2



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## B.Pharmacy II Semester (PCI) (Main) Examination Jul/Aug 2024

Subject & Code: BIOCHEMISTRY & BP203T

Time: 3 Hours

Max.Marks: 75

### PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	What is a carbohydrate and its function in human body?	1	2
2	Define glycolysis and gluconeogenesis.	1	2
3	Mention types of RNA & their functions.	2	2
4	Write the functions of Nucleic acids.	2	2
5	What are the functions of lipids in the human body?	1	2
6	What is atherosclerosis?	2	2
7	What is enzyme inhibition?	2	2
8	Give biological significance of proteins.	2	1
9	Differentiate between DNA & RNA.	5	2
10	Define Transcription and Translation.	2	2

### PART- B

Note: Answer any TWO questions

(2 x 10 = 20 Marks)

Q.No.	Question	CO	BL
11	Define enzymes, Write their IUB classification and factors affecting enzyme action.	2	2
12	Explain the DNA replication process and enzymes involved in this process.	3	2
13	Discuss the biosynthesis of purine nucleotides.	3	2

### PART- C

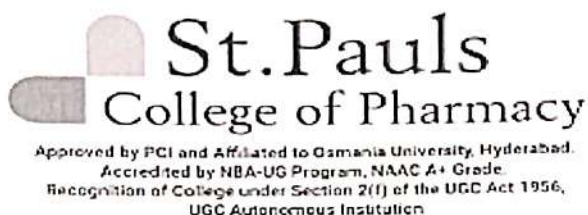
Note: Answer any SEVEN questions

(7 x 5 = 35 Marks)

Q.No.	Question	CO	BL
14	Write a note on lipid metabolism.	5	2
15	Explain briefly, about $\beta$ -oxidation of fatty acids.	5	2
16	Write about Glycolysis pathway, energetic and significance.	1	2
17	How the hormones regulate blood glucose levels and Diabetes mellitus?	4	4
18	Explain the Electron transport chain.	1	2
19	Explain the urea cycle and its disorders.	5	2
20	Explain the Citric acid pathway.	1	2
21	Describe the production of bile acids and steroid hormones from cholesterol.	3	2
22	Explain therapeutic, diagnostic applications of enzymes and isoenzymes.	2	2

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Code. No.B082415



**B.Pharmacy II Semester (PCI) (Main) Examination Jul/Aug 2024**

**Subject & Code: COMPUTER APPLICATIONS IN PHARMACY & BP205T.**

**Time: 2 Hours**

**Max.Marks: 50**

**PART- A**

**Note: Answer any TWO questions**

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

Q.No.	Question	CO	BL
1	Write the usage of Text Information Management System & CDS in data analysis.	5	3
2	Describe in detail about the softwares used in pharmacokinetics and mathematical model drug design.	3	4
3	Add a note on Pharmacy Drug database and Web Servers.	2	5

**PART B**

**Note: Answer any SIX questions**

**(6 x 5 = 30 Marks)**

Q.No.	Question	CO	BL
4	Give outline on Two's complement method in number system.	1	1
5	Write a note on MYSQL	1	3
6	What are the process specifications in Information system?	2	4
7	Describe in detail about mobile technology and adherence monitoring.	3	2
8	Give brief introduction to HTML.	2	3
9	List out the applications of computers in Pharmacy.	3	1
10	Discuss in brief about objectives of Bioinformatics.	4	5
11	Explain about Patient Information system.	3	4

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Code. No.B082424

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## B.Pharmacy II Semester (PCI) (Main) Examination Jul/Aug 2024

Subject &amp; Code: Pathophysiology &amp; BP204T

Time: 3 Hours

Max. Marks: 75

### PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Explain the pattern of Cell Death	1	2
2	Define Anemia. Differentiate different types of anemia	3	4
3	Explain the term Transudate and Exudate	1	2
4	Investigate the causative organism of Syphilis and Gonorrhea	6	5
5	Explain the causes of Meningitis	4	2
6	Define hepatitis. Explain signs and symptoms of Hepatitis-B	5	1
7	Describe Myocardial infection in brief	2	4
8	Evaluate the signs and symptoms of Parkinsonism	4	5
9	Define the terms: a. Cell swelling b. Calcification	1	1
10	Illustrate the complications of Diabetes	3	3

### PART B

Note: Answer any TWO questions

(2 x 10 = 20 Marks)

Q.No.	Question	CO	BL
11	Explain the mechanism of Acute Inflammation	1	2
12	Define Hypertension. Discuss Etiology and Pathophysiology of Hypertension	2	1
13	Classify Cancer and explain etiopathogenesis of Cancer	5	2

### PART C

Note: Answer any SEVEN questions

(7 x 5 = 35 Marks)

Q.No.	Question	CO	BL
14	Explain in brief about basic principles of Wound healing	1	2
15	Describe the pathogenesis of Gouty Arthritis	5	2
16	Differentiate Atherosclerosis and Arteriosclerosis. Explain in brief about pathogenesis of Atherosclerosis	2	4
17	Discuss etiopathogenesis of Asthma	2	2
18	Outline Chemical Mediators of Inflammation. Explain the role of Histamine in brief	1	4
19	Discuss pathogenesis of Depression	4	2
20	Explain Pathogenesis of Inflammatory bowel disease	4	1
21	Estimate the etiopathogenesis of Jaundice	5	5
22	Discuss pathogenesis of Hypothyroidism	3	2

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Code: B082422

**B. Pharmacy II Semester (PCI) (Main) Examination Jul/Aug 2024****Subject & Code: Pharmaceutical Organic Chemistry-I & BP202T****Time: 3 Hours****Max Marks: 75****PART-A****Note: Answer ALL Questions****(10x2= 20 Marks)**

Q. No	Question	CO	BL
1	Write the IUPAC name and structure of Isocaproic acid.	1	1
2	Write the functional isomer of Ethoxyethane and Ethylethanoate.	2	2
3	Write the structure and uses of Benzaldehyde and Chloroform.	1	1
4	What is Baeyer's test? Give its significance.	5	2
5	Explain $sp^2$ hybridization in alkenes.	3	1
6	Write the metamer of a) 2 Hexanone b) Propoxy Ethane	2	2
7	Write the structure and IUPAC name of the following reaction $2(1\text{Chloropropane}) + 2(\text{Sodium metal}) + \text{dry ether} \longrightarrow$	3	3
8	Write the structure and IUPAC name of the following reaction $2\text{-Methyl 2-Butene} + \text{Diborane} + \text{Hydrogen peroxide} \longrightarrow$	3	3
9	Arrange the following compounds in the decreasing order of their basicity and give reason. a) Ammonia b) Trimethylamine c) Ethylamine d) Dimethylamine	4	5
10	Arrange the following compounds in the increasing order of their stability and give reason. a) 2-Methyl 2-Butene b) 2,3-Dimethyl 2-Butene c) 1-Butene d) 2-Butene	4	4

**PART B****Note: Answer any TWO Questions****(2x10= 20 Marks)**

Q. No	Question	CO	BL
11	What are the characteristic reactions of haloalkanes? Explain their mechanism, stereochemistry with an example each. Mention the factors affecting these reactions.	3	2
12	What happens when 2,4-Hexadiene is treated with Hydrogen bromide gas in the a) Presence of peroxides b) Absence of peroxides. Explain the mechanism in detail. Mention the structure of the major product formed with its IUPAC name. State the rules governing the above two reactions.	3	2
13	Explain in detail a) Cannizzaro reaction b) Basicity of amines and effect of substituents on basicity	6 4	1 2

**PART C****Note: Answer any SEVEN Questions****(7x5= 35 Marks)**

Q. No	Question	CO	BL
14	Explain electromeric effect.	4	2
15	Write short notes on Perkin condensation.	6	1
16	What are the qualitative tests for carbonyl compounds?	5	2
17	Explain the stability of Free radicals.	4	2
18	Write the IUPAC system of nomenclature of carboxylic acids.	1	1
19	Write the Kolbe's electrolysis for the preparations of alkanes and alkynes.	3	1
20	Explain the Hinsberg method of separation of amines.	5	2
21	Write short notes on Ozonolysis of Alkenes and alkynes.	5	3
22	Write the structure and uses of a) Glycerol b) Cinnamaldehyde	1	1

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## B.Pharmacy II Semester (PCI) (Main) Examination Jul/Aug 2024

Subject &amp; Code: Environmental Sciences &amp; BP206T

Time: 2 Hours

Max.Marks: 50

### PART- A

Note: Answer any TWO questions

(2 x 10 = 20 Marks)

Q.No.	Question	CO	BL
1	Explain the Forest Resources & Assess the role of an Individual in conservation of Natural resources	2	5
2	Categorize the Natural resources and Differentiate between the Renewable and Non renewable resources	1	4
3	Out list the concept, structure and functions of Ecosystem. Briefly explain any two ecosystems.	3	4

### PART B

Note: Answer any SIX questions

(6 x 5= 30 Marks)

Q.No.	Question	CO	BL
4	Explain the mineral resources & the health problems due to the mining of minerals	2	2
5	Describe the various grass land ecosystems.	3	2
6	Define Air Pollution & Present various reasons for the Air Pollution	4	4
7	Outline the water Resources & conclude conservation of water	2	5
8	Examine the reasons for soil pollution and its impact on the health	5	4
9	Illustrate a food chain and Design a food web with examples.	3	6
10	Describe aquatic ecosystem & it's beneficial to mankind?	3	2
11	Simplify a note on Deforestation	2	5

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