Printed Pages: 02 **Sub Code: PH124**

Paper Id: 150229 **Roll No.** | | | | | | | | | | |

B. PHARM
(SEM-II) THEORY EXAMINATION 2018-19
COMPUTER FUNDAMENTALS AND PROGRAMMING

Time: 3 Hours ***Total Marks: 100***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. What do you understand by the term RAM and ROM?
b. How UNIX is different from MS-DOS?
c. Differentiate between local area network and wide area network.
d. What is the purpose of MS-Excel?
e. Differentiate between LAN, MAN, WAN.
f. What do you understand by real time system?
g. Define Program.
h. What is modem?
i. Differentiate the batch and interactive operating system.
j. What do you understand by truth table?

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a. Discuss system software and application software with suitable examples.
b. Differentiate between a repeater and router in context of networking.
c. What is the concept of four 'P's in context to presentations? Explain.
d. How to add the animation and multimedia effects in a presentation? Explain.
e. What is a form? How to create a form in MS-Access 2003? Explain

SECTION C

3. Attempt any *one* part of the following: 10 x 1 = 10

(a) Discuss some of the important features of Windows.
(b) Write a detail note on evolution of Operating System.

4. Attempt any *one* part of the following: 10 x 1 = 10

(a) What do you understand by a database? How do you create a table in MS Access?
(b) What are the Various components of computer system? Explain.

5. Attempt any *one* part of the following: 10 x 1 = 10

(a) What are various types of computer classifications? Describe any two of them.
(b) List the various functions of operating system. Also define the batch and interactive operating system.

6. Attempt any *one* part of the following: 10 x 1 = 10

(a) Discuss in detail about the Uses of internet in Pharmaceutical industry.
(b) What do you understand by the data models and instance? Explain.

7. Attempt any *one* part of the following: 10 x 1 = 10

(a) How to create a document in Word 2003 with proper left, right, top, and bottom margins? Explain the steps used for it.

(b) Explain the various applications of computer in pharmaceutical and clinical studies.

Printed Pages:1 **Sub Code:BP203T**

Paper Id: 150297 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM-II) THEORY EXAMINATION 2018-19
BIOCHEMISTRY

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If you require any missing data, choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. What are Phospholipids? Give examples.

b. What are energy rich compounds? Give examples.

c. Define Glycogenesis and Glycogenolysis.

d. Write the hormones involved in the regulation of blood glucose level.

e. What do you understand by the term Transamination? Give example.

f. What is Allosteric inhibition?

g. Define Genetic code with examples.

h. Write down the synthesis of 5-HT (5-hydroxytryptamine) from Tryptophan.

i. Write down the biological role of Nucleic Acid.

j. Define Enthalpy and Entropy.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. What is gluconeogenesis? Give an outline of reactions. How are these reactions controlled? What is biological importance of these reactions?

b. Give the derivation of Michaelis-Menton equation and also explain factor affecting enzyme activity.

c. Describe the process of DNA replication in detail.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Describe Embden Meyerhof pathway (glycolysis) in the body with energetic.

b. Enumerate the ketone bodies. Describe the formation and utilization of ketone bodies in the body.

c. Discuss in detail about urea cycle. Also give the significance of urea cycle.

d. Write in detail the mode of protein biosynthesis with schematic representations.

e. What are enzymes? Describe various processes of inhibition of enzymes activity.

f. Write down the biosynthesis and biological significance of Dopamine, Noradrenaline and Adrenaline.

g. Discuss in detail about the De novo synthesis of fatty acids.

Printed Pages: 02 **Sub Code:BOP123**
Paper Id: 150203 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM-II) THEORY EXAMINATION 2018-19
ANATOMY, PHYSIOLOGY & PATHOPHYSIOLOGY-II

Time: 3 Hours ***Total Marks: 100***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. What are meninges? Enlists different layers of meninges with its function.
b. What are excitatory and inhibitory neurotransmitters?
c. Write function of respiratory center of the medulla oblongata.
d. What are the different brain waves of the EEG? Give its clinical significance.
e. What if ABO system of blood grouping?
f. What is fibrin? Write its role in blood coagulation
g. What is GFR?
h. Give function of ADH and ANP hormone in physiology of urine formation.
i. What is the difference between acute and chronic renal failure?
j. What is mucus? Give its important function.

SECTION B

2. Attempt any *three* of the following: 10x3=30

a. Discuss in detail about the specialized function and variouscentres of cerebrum and medulla oblongata.
b. Discuss in detail about the physiology of parasympathetic system.
c. Discuss in detail about the process of Haemopoiesis.
d. Discuss in detail about the pathophysiology of hypersensitivity reaction.
e. Draw cross section of human kidney and discuss in detail about the physiology of micturition.

SECTION C

3. Attempt any *one* part of the following: 10x1=10

a. Draw cross section of pancreas and discuss the role of various endocrine and exocrine secretions in the process of digestion.
b. Discuss in detail about the pathophysiology of UTI with its treatment and management.

4. Attempt any *one* part of the following: 10x1=10

a. What is gall bladder and discuss its role in the regulation and secretion of bile.
b. Discuss in detail about the role of renin in the regulation of blood pressure and urine output.

5. Attempt any *one* part of the following: 10x1=10

a. Discuss pathophysiology of pancreatitis with its treatment and management.
b. Discuss in detail about the role of small and large intestine in the absorption of nutrients.

6. Attempt any *one* part of the following: 10x1=10

a. Discuss in detail about the pathophysiology of sickle cell anemia and megaloblastic anemia.
b. Discuss in detail about the role of various metabolic processes performed by liver as energetics.

7. Attempt any *one* part of the following: 10x1=10

a. Discuss in detail about the pathophysiology, prevention and treatment of Zollinger Ellision syndrome.
b. Write note on pathophysiology of liver cirrhosis with its treatment and management.

Sub Code: BP202T

Paper Id: 910023 Roll No: | | | | | | | | | | | | | |

B PHARM
(SEM II) THEORY EXAMINATION 2019-20
PHARMACEUTICALORGANIC CHEMISTRY

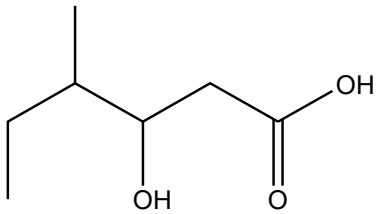
Time: 3 Hours **Total Marks: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief **10 x 2 = 20**

a) Write the chemical structure & uses of succinic and oxalic acid
b) Define benzoin condensation reaction
c) Give identification test of aldehydes and alcohol
d) Differentiate between E_1 and E_2 reaction
e) Write the two examples and uses of aliphatic amines
f) Give the IUPAC name of



g) Discuss uses of vanillin and cinnamaldehyde
h) Give free radical reactions of alkenes
i) Give the IUPAC name of following compound-: $CH_3CH_2CH_2CH_2COOH$
j) What are electrophile and nucleophile?

SECTION B

2. Attempt any two parts of the following: **2 X 10 = 20**

a) What are SN1 and SN2 reactions. Discuss the kinetics , mechanism and factors affecting the SN1 and SN2 reactions
b) Write about vanillin and benzaldehyde.
c) Give short notes on cannizaro reaction and aldol condensation.

SECTION C

3. Attempt any five parts of the following: **7 X 5 = 35**

a) Define ozonolysis.
b) Write the structure and uses of chloroform and trichloroethylene.
c) Explain diels alder reaction with mechanism.
d) Explain with examples markownikoffs rule.
e) Write about basicity of aliphatic amines and factors affecting it.
f) What is isomerism ?. Discuss various type of structural isomerism with examples.
g) Define Nomenclature of organic compounds with examples..

Sub Code:BP201T

Paper Id: 910022 Roll No:

B PHARM
(SEM-II) THEORY EXAMINATION 2019-20
HUMAN ANATOMY AND PATHOPHYSIOLOGY-II

Time: 3 Hours ***Total Marks: 75***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. What is an action potential

b. What are the name of lobes of cerebral hemisphere

c. What is the role of the mouth in digestive system

d. Differentiate between vital capacity and total lung capacity.

e. Define Glomerular Filtration Rate (GFR).

f. Give the name of disorders of the male reproductive system.

g. Define asthma and Pneumonia.

h. Enlist the function of hormones.

i. Briefly explain cushing syndrome.

j. Where does the fertilization take place in the female?

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. I. Describe cerebrospinal fluid and its circulation
II. Describe the structure and functions of medulla oblongata.

b. Define ovulation. Explain different phases of the female reproductive cycle

c. Describe the mechanism of ATP Formation.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Explain the events of signal transmission at a chemical synapse.

b. Describe the surface anatomy of lungs along with suitable diagrams.

c. Describe the hormones of Pancreas and their physiological role.

d. Describe different parts and types of Nephron.

e. What is BMR and how it is determined? Describe various factors affecting BMR.

f. Write a short note on gland of Emergency.

g. Define Genetics. Write a short note on chromosomes.

Sub Code:BP201T

Paper Id: 910022 Roll No:

B PHARM
(SEM-II) THEORY EXAMINATION 2019-20
HUMAN ANATOMY AND PATHOPHYSIOLOGY-II

Time: 3 Hours ***Total Marks: 75***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. What is an action potential

b. What are the name of lobes of cerebral hemisphere

c. What is the role of the mouth in digestive system

d. Differentiate between vital capacity and total lung capacity.

e. Define Glomerular Filtration Rate (GFR).

f. Give the name of disorders of the male reproductive system.

g. Define asthma and Pneumonia.

h. Enlist the function of hormones.

i. Briefly explain cushing syndrome.

j. Where does the fertilization take place in the female?

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a. Explain the events of signal transmission at a chemical synapse.

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c. Describe the hormones of Pancreas and their physiological role.

d. Describe different parts and types of Nephron.

e. What is BMR and how it is determined? Describe various factors affecting BMR.

f. Write a short note on gland of Emergency.

g. Define Genetics. Write a short note on chromosomes.

PAPER ID-411322

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2021-22
PHARMACEUTICAL ORGANIC CHEMISTRY I

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Draw the structure for 3-Methoxypentanoyl chloride.
b.	Give IUPAC name for CH_3-CH(CH_3)-CO-CH_2-CH_3.
c.	Define "Saytzeff's rule".
d.	Outline the Diels-Alder reaction of conjugated dienes.
e.	Summarize any two reactions of alkyl halide.
f.	Discuss the structure and uses of ethyl alcohol.
g.	Discuss about"Inductive effect".
h.	Describe any two qualitative tests for carbonyl compounds.
i.	Discuss the structure and uses of acetyl salicylic acid.
j.	Show the structure and uses of amphetamine.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Illustrate the mechanism of Markovnikov's and Anti-Markovnikov's orientation of alkene with suitable example.
b.	Discuss the reaction and mechanism of aldol condensation and cross aldol condensation with suitable example.
c.	Illustrate SN_1 versus SN_2 reaction.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	Discuss about structural isomerism. Write a note on chain, positional and functional isomerism.
b.	Explain the reaction and mechanism of chlorination of alkane with suitable example.
c.	Explain 1, 2 and 1,4 addition mechanism in conjugated dienes with suitable examples.
d.	Outline the chemical tests for alcohols. Give the structure and uses of glycerol.
e.	Outline the mechanism of Cannizzaro reaction with suitable example.
f.	Discuss the acidity of aliphatic carboxylic acid and the effect of substituents on their acidity.
g.	Define aliphatic amines. Discuss the basicity of aliphatic amines and the effect of substituents on their basicity.

Subject Code: BP204T

PAPER ID-411585

Roll No: | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2021-22
PATHOPHYSIOLOGY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Differentiate between hypertrophy and hyperplasia with examples.
b.	Discuss in brief megaloblastic anemia.
c.	Define hepatitis and write its various types.
d.	Enlist the causes of cell injury.
e.	Define seizures and classify its types.
f.	Discuss the types of osteoporosis with emphasis on its cause.
g.	Outline the clinical signs of inflammation.
h.	Define myocardial infarction.
i.	Write the risk factors of atherosclerosis.
j.	Define hemophilia.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Write in detail the pathogenesis of cell injury.
b.	Explain the pathophysiology of cancer.
c.	Classify hypertension. Illustrate its pathogenesis and complications.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Discuss the pathophysiology of peptic ulcer.
b.	Illustrate types of diabetes and write their pathophysiology.
c.	Write a detailed note on AIDS.
d.	Explain the feedback systems involved in homeostasis.
e.	Write an exhaustive note on pathophysiology of asthma.
f.	Discuss the pathophysiology of Parkinson Disease.
g.	Classify types of tuberculosis. Explain its pathogenesis.

PAPER ID-411813

Subject Code: BP201T

Roll No: | | | | | | | | | | | | | |

BPHARM

(SEM II) THEORY EXAMINATION 2021-22

HUMAN ANATOMY AND PHYSIOLOGY II

Time: 3 Hours ***Total Marks: 75***

Notes:

- *Attempt all Sections and Assume any missing data.*
- *Appropriate marks are allotted to each question, answer accordingly.*

SECTION-A

Q1.	Attempt **All** of the following Questions in brief	Marks**(10X2=20)**
a	Define the term Cerebrum.	
b	Define Glomerular Filtration Rate (GFR).	
c	Enlist the function of hormones.	
d	What do you mean by gametogenesis?	
e	What is the role of the Hydrochloric acid in digestive system?	
f	Give functions of cerebellum.	
g	Draw a well labeled diagram of neuron.	
h	Define tidal volume.	
i	Draw a well labeled diagram of Kidney.	
j	Enlist function of Saliva.	

SECTION-B

Q2.	Attempt **ANY Two** of the following Questions	Marks**(2X10=20)**
a	Explain in detail about autonomic nervous system?	
b	Write various parts of digestive system. Discuss the physiology of digestion in detail.	
c	Discuss in detail about endocrine system. Classify Hormones and explain the mechanism of action of Hormones .	

SECTION-C

Q3.	Attempt **ANY five** following Question	Marks **(5X7=35)**
a	Describe the mechanism of ATP Formation.	
b	Discuss in detail about structure of liver and role of bile juice in digestion.	
c	Describe different parts and types of Nephron.	
d	Discuss the mechanism of Neurohumoral transmission in CNS.	
e	Explain the physiology of menstruation cycle.	
f	Define the term BMR and how it is determined? Describe various factors affecting BMR.	
g	Explain the anatomy of Respiration and discuss it mechanism in detail	

PAPER ID-411433

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2021-22
BIOCHEMISTRY

Time: 3 Hours *Total Marks: 75*

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Explain the term Phospholipids with examples.
b.	Define essential and non-essential amino acids.
c.	Discuss the term Transamination giving an example.
d.	Define genetic code with suitable example.
e.	Define Enthalpy and Entropy.
f.	Enlist two diseases associated with glycogen metabolism.
g.	Define ketone bodies and ketoacidosis.
h.	Differentiate between Apoenzyme and Holoenzyme
i.	Define electron transport chain and ATP.
j.	Write down the biological role of Nucleic Acid.

SECTION B

2. Attempt any *two*parts of the following: **2 x 10 = 20**

a.	Demonstrate the kinetics of enzymes with derivation of Michaelis-Menton Equation.
b.	Explain the salvage pathway of purine and pyrimidine biosynthesis.
c.	What are ketone bodies? Explain the reactions involved in formation of ketone bodies with suitable example.

SECTION C

3. Attempt any *five*parts of the following: **7 x 5 = 35**

a.	What is oxidative phosphorylation with its mechanism.
b.	Write a note on ß-oxidation of saturated fatty acid.
c.	What is enzyme? Discuss effect of temperature and pH on properties of enzyme.
d.	Discuss DNA repair mechanism.
e.	Describe urea cycle with the reactions involved.
f.	Illustrate the steps involved in biosynthesis of cholesterol.
g.	Explain the structure of DNA and RNA.

Printed Pages:01 **Sub Code: BP202T**

Paper Id: 238184 **Roll No.** | | | | | | | | | | |

B. PHARM
(SEM II) THEORY EXAMINATION 2022-23
PHARMACEUTICAL ORGANIC CHEMISTRY-I

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) What is Electromeric effect? Give examples
(b) Explain the term "Inductive effect"with suitable example.
(c) What is Walden inversion?
(d) What is Ozonolysis?
(e) Write about Diel-Alder reaction.
(f) Give reaction for Friedel Crafts reaction.
(g) What is Saytzeff's orientation?
(h) Rosenmund Reduction is used for?
(i) Give structure of 3-chloro 2-hydroxy hexanoic acid.
(j) Write IUPAC name of $CH_3OCH_2CH_2\ CH_2\ CH_2CHO$

SECTION B

2. Attempt any *two*parts of the following: **2 x 10 = 20**

(a) Explain kinetics, order of reactivity of alkyl halides, stereochemistryand rearrangement of carbocations regarding SN1 and SN2 reactions.
(b) Elaborate Basicity, effect of substituent on Basicity of Aliphatic amines with suitable examples.
(c) In E1 and E2 reactions –Discuss Kinetics, order of reactivity of alkyl halides and rearrangement of carbocations. Elaborate Factors affecting E1 and E2 reactions.

SECTION C

3. Attempt any *five*parts of the following: **7 x 5 = 35**

(a) Describe in detail aldol condensation and Crossed Aldol condensation.
(b) Explain Structural isomerism in organic compounds.
(c) Give detailed account of free radical addition reactions of alkenes andAnti-Markownikoff's orientation.
(d) Give Reactions of Aldehydes and Ketones? What are Nucleophilic addition reactions of Carbonyl compounds and How they differ in acids and Bases?
(e) Discuss Qualitative tests of Alcohols. Give Structure and uses of Cetosteryl alcohol and Iodoform.
(f) Give preparations and Reactions of Alkyl Halides.
(g) Write short note on Structure and Uses of Acetic acid, Citric acid, Acetyl salicylic acid, Amphetamine and Acetone.

Sub Code: BP-202T

Printed Pages: 1
Paper Id: [233673]

Roll No.

B PHARM
(SEM II) THEORY EXAMINATION 2022-2023
PHARMACEUTICAL ORGANIC CHEMISTRY-I

Total Marks: 75

Time: 3 Hours

Note: Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

10 x 2 = 20

1. Attempt *all* questions in brief.
   a. Give structure of the following compounds :-
      i) Acetic acid ii) Lactic acid iii) Salicylic acid iv) Succinic acid
   b. Enlist qualitative tests for Alcohol.
   c. What is Aldol condensation?
   d. Explain Acidity of Carboxylic acids and Basicity of Aliphatic Amines.
   e. What are SN_1 and SN_2 reactions? Give examples.
   f. Explain SP^3 hybridization in Alkanes.
   g. What is structural isomerism in organic compounds? Give examples.
   h. What are Alkyl Halides?
   i. Explain in brief Nucleophilic addition.
   j. What is Diel-Alder reaction?

SECTION B

2 x 10 = 20

2. **Attempt any *two* parts of the following:**
   a. Explain factors affecting SN_1 and SN_2 reactions in detail.
   b. What are E_1 and E_2 reactions? Give Markownikoff's orientation.
   c. What is Inductive effect? Give qualitative tests for Carboxylic acid, Amides and Ester.

SECTION C

7 x 5 = 35

3. **Attempt any *five* parts of the following:**
   a. Discuss three methods of preparation of Amines.
   b. Explain Saytzeff's rule with suitable examples.
   c. Give chemical tests to differentiate between primary secondary and tertiary Alcohols.
   d. Write a note on Cannizzaro reaction.
   e. Write IUPAC nomenclature rules for the naming of carboxylic acids.
   f. Explain Ozonolysis and electrophilic addition reaction of Alkenes.
   g. What is IUPAC system of nomenclature of organic compounds?

Printed Pages: 1
Paper Id: 233631

Sub Code: BP-204T

Roll No

B PHARM
(SEM II) THEORY EXAMINATION 2022-23
PATHOPHYSIOLOGY

Total Marks: 75

Time: 3 Hours

Note: Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) Define the term Homeostasis with example

(b) What are the causes of cell injury.

(c) What is congestive Heart failure. Differentiate between Forward and Backward Heart failure

(d) Illustrate risk factors of COPD.

(e) Differentiate between Type I and Type II Diabetes.

(f) Give the Etiology of Alzheimer disease.

(g) What is Rheumatoid Arthritis. Give its signs and symptoms.

(h) Define Gout and write its types.

(i) Illustrate Causative agent, sign and symptoms of Tuberculosis

(j) Explain the Etiology of Syphilis.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

(a) Discuss the components and type of Feedback system.

(b) Elaborate Pathophysiology of Acute and Chronic Renal failure.

(c) Explain the etiology, types and pathogenesis of Diabetes Mellitus.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

(a) Discuss basic Mechanism involved in the process of inflammation.

(b) Explain Pathophysiology of Hypertension.

(c) Illustrate different types of epilepsy. Explain its pathogenesis.

(d) Describe basic principle of wound healing in skin.

(e) Explain the pathophysiology of AIDS.

(f) Discuss causative agent, Mode of transmission and pathogenesis of Leprosy

(g) What is Peptic Ulcer. Discuss its pathogenesis.

B PHARM
(SEM II) THEORY EXAMINATION 2022-23
HUMAN ANATOMY AND PHYSIOLOGY-II

Time: 3 Hours *Total Marks: 75*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) Describe the term "Neural Synapse".

(b) Identify various types of Cholinergic and Adrenergic Receptors.

(c) Recall various functions of Insulin and Glucagon.

(d) Summarize the terms "BMR and CPR".

(e) Enumerate the role of trueand falsevocalcord.

(f) Investigatevarious types of cellspresentin small intestine

(g) Classify varioustypesofhormones released from Pituitary gland

(h) Statethelocationandfunctionsof Pinealgland.

(i) Define "menarche"and "menopause".

(j) Elaborate the meaning of capacitation.

SECTION B

2. Attempt any *two*parts of the following: **2 x 10 = 20**

(a) Discuss in detail about the composition, formation, and circulation of cerebrospinal fluid.

(b) Show the structure of tooth with well labeled diagram

(c) Illustrate in detail about the structure and functions of Kidney.

SECTION C

3. Attempt any *five*parts of the following: **5 x 7 = 35**

(a) Describe the structure and functions of Spinalcord.

(b) Demonstratetheanatomyandphysiologyofliverandgallbladder.

(c) Demonstrate the process of O_2 and CO_2 transport in blood.

(d) Illustrate the physiology of Urine formation with well labeled diagram.

(e) Explainthe synthesis,release, andcirculation ofthyroidhormones.

(f) Comparevariousphasesofmenstrualcycle along withits hormonal regulation.

(g) Assessthe structure of Testis and processof Spermatogenesis.

Printed Pages: 01 **Sub Code: BP203T**

Paper Id: 238002 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM II) THEORY EXAMINATION 2022-23
BIOCHEMISTRY

Time: 3 Hours ***Total Marks: 75***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) Classify amino acids with their structures.

(b) What are essential fatty acids? Give examples.

(c) Define the term Glycogen storage disease.

(d) What are uncouplers? Give examples.

(e) Give examples for bile acids and its role in lipid metabolism.

(f) Explain the term Phenylketonuria.

(g) Differentiate codons and anticodons.

(h) Write a note on gout. What are operons?

(i) Classify enzymes with at least one example each.

(j) What is Michaelis-Menten plot?

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

(a) Describe the reactions of Citric acid cycle with its bioenergetics.

(b) Explain the steps of protein biosynthesis and a note on protein synthesis inhibitors.

(c) Elaborate the reactions of urea cycle and its disorders. What is transamination?

SECTION C

3. Attempt any *five* parts of the following: **5 x 7 = 35**

(a) Discuss the various energy rich compounds with their classification and structure.

(b) Explain the HMP shunt pathway with its significance.

(c) Write a short note on Electron Transport Chain and Oxidative Phosphorylation.

(d) Describe the formation and utilization of ketone bodies.

(e) Discuss the β-oxidation of fatty acid with its energetics.

(f) Write short notes on Purine nucleotide biosynthesis.

(g) Describe the competitive enzyme inhibition with suitable examples.

Printed Pages: 01 Sub Code: BP 203T

Paper Id: 233689 Roll No.

B PHARM
(SEM II) THEORY EXAMINATION 2022-2023
BIOCHEMISTRY

Time: 3 Hours *Total Marks: 75*

Note: Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

10 x 2 = 20

1. Attempt *all* questions in brief.

a. Define Glycogenesis and Glycogenolysis

b. How many ATP are produced in Glycolysis and TCA cycle?

c. Define co-enzyme and Electron Transport Chain.

d. Define Enthalpy and Entropy.

e. What is Allosteric inhibition?

f. Define HMP-shunt.

g. Define the condition and reason of Gout.

h. What are Phospholipids? Give examples.

i. What is Oxidative Phosphorylation?

j. Define Genetic code with examples

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Give the derivation of Michaelis-Menton equation and also explain various factors affecting enzyme activity.

b. Describe disorders of Lipid metabolism in detail.

c. Explain structure of DNA and RNA and their functions.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Discuss in detail about urea cycle. Also give the significance of urea cycle.

b. Write a short note on :- i).Genetic code ii) Hypercholesterolemia

c. Write a note on β- oxidation of saturated fatty acids.

d. Write the biosynthesis of ketone bodies and their utilization.

e. Describe Coenzyme with its structure and biological function.

f. Discuss in detail about the De novo synthesis of fatty acids.

g. What is reducing sugar? Explain the cyclic structure of Glucose.

PAPER ID-411258

Subject Code: BP202T

Roll No:

BPHARMA
(SEM II) THEORY EXAMINATION 2023-24
PHARMACEUTICAL ORGANIC CHEMISTRY I

ME: 3 HRS

M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.** 10 x 2 = 20

a.	What is chain isomerism?
b.	What are electrophiles and nucleophiles?
c.	What is Markownikoff's rule?
d.	Write the structure of aldol and benzoin.
e.	What is ozonolysis?
f.	Give identification test of amines.
g.	What is Diels-Alder's reaction?
h.	What is the order of reactivity of 1°, 2°, and 3° alkyl halides?
i.	What do you understand by Hoffman's rule?
j.	Differentiate between E1 and E2 reactions.

SECTION B

2. **Attempt any *two* parts of the following:** 2 x 10 = 20

a.	Define the Nomenclature of organic compounds with examples.
b.	What are SN1 and SN2 reactions? Discuss the kinetics, mechanism, and factors affecting the SN1 and SN2 reactions
c.	Give detailed notes on the Cannizaro reaction and Aldol condensation.

SECTION C

3. **Attempt any *five* parts of the following:** 7 x 5 = 35

a.	Define the Nomenclature of organic compounds with examples.
b.	Discuss 1,2 and 1,4 additions in conjugated dienes.
c.	Write about the basicity of aliphatic amines and the factors affecting it.
d.	Write down qualitative tests for carboxylic acids and alcohols.
e.	Write the structure and uses of chloroform and trichloroethylene.
f.	Discuss about preparation, chemical reactions, and uses of monocarboxylic acids.
g.	Discuss in detail about nucleophilic addition reactions in carbonyl compounds

PAPER ID-411051

Subject Code: BP204T

Roll No:

BPHARMA
(SEM II) THEORY EXAMINATION 2023-24
PATHOPHYSIOLOGY

TIME: 3 HRS M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Interpret sign and symptoms of angina pectoris.
b.	Define cell injury.
c.	Differentiate between megaloblastic anemia and sickle cell anemia?
d.	Discuss the sign and symptoms of typhoid.
e.	What is the role of interleukins in inflammation process.
f.	Give a short note on hypothyroidism and possible reasons for its development.
g.	Mention the causes of rheumatoid arthritis.
h.	Give the causative agent of leprosy.
i.	Write a note on chronic renal failure.
j.	Write the risk factors of gout.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Write an exhaustive note on pathogenesis of diabetes
b.	Discuss in detail pathophysiology of Asthma.
c.	Define cancer.Explain the pathophysiology of cancer.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	Discuss pathogenesis and complications of hypertension.
b.	Define Anemia. Elaborate Iron Deficiency Anemia.
c.	Discuss chemical mediators involved in the process of inflammation.
d.	Explain the pathophysiology of tuberculosis.
e.	What is cellular adaption? Discuss atrophy and hypertrophy with examples.
f.	Explain the pathophysiology of AIDS.
g.	Define hepatitis. What are its various types? Explain them in detail.

PAPER ID-311933

Subject Code: BP201T

Roll No: | | | | | | | | | | | | | |

BPHARM

(SEM II) THEORY EXAMINATION 2023-24

HUMAN ANATOMY AND PHYSIOLOGY II

TIME: 3HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Define the term synapse.
b.	What is Dura mater?
c.	Write the function of brush border.
d.	Name all the salivary glands.
e.	Write the dental formula of temporary teeth.
f.	Define the term vital capacity.
g.	What do you mean by GFR?
h.	Define Autocrine and Paracrine.
i.	What is menopause and menarche?
j.	Draw the structure of sperm.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Explain about the synthesis, storage, and release of thyroid hormone.
b.	Draw a well labeled diagram of male reproductive system and explain spermatogenesis.
c.	What is gastric juice? Describe the various phases of gastric secretion.

SECTION C

3. Attempt any *five* parts of the following: **5x 7 = 35**

a.	Explain physiology of urine formation.
b.	Write a note on Adrenal gland.
c.	Discuss about pituitary gland with the help of diagram.
d.	What is Breathing? Explain mechanism of respiration in details.
e.	Define reflex action and explain the different components of reflex arc.
f.	Write the part of Brain and explain cerebrum and its functions in details.
g.	Explain the anatomy and physiology of liver.

Roll No:

BPHARMA
(SEM II) THEORY EXAMINATION 2023-24
HUMAN ANATOMY AND PHYSIOLOGY II

TIME: 3 HRS | M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.** 10 x 2 = 20

a.	What are the functions of neurotransmitter?
b.	Define action potential with suitable example.
c.	What is BMR? Justify its significance.
d.	Elaborate the term "Inheritance".
e.	Highlight the roles of autonomic nervous system in digestion process.
f.	Which cells of pancreas are responsible for secretion of somatostatin?
g.	Differentiate between menarche and menopause.
h.	Write about tidal volume and vital capacity of lungs.
i.	Which hormone takes part in ovulation process?
j.	Iodine is believed to be involved in the formation thyroid hormones. Justify it.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Explain various resuscitation methods.
b.	Describe the process of acid formation and regulation in stomach.
c.	Elaborate the mechanism of action of hormones.

SECTION C

3. **Attempt any *five* parts of the following:** 7 x 5 = 35

a.	Discuss the process of spermatogenesis.
b.	Enumerate the hormones secreted by pituitary gland with functions.
c.	Explain the reflex action with suitable diagram.
d.	Describe the role of pancreas in digestion process.
e.	Write an exhaustive note on protein synthesis in eukaryotes.
f.	Write a short note on renin angiotensin aldosterone system.
g.	Explain the structure of cerebellum with its functions.

PAPER ID-410973

Subject Code: BP203T

Roll No:

BPHARMA
(SEM II) THEORY EXAMINATION 2023-24
BIOCHEMISTRY

TIME: 3 HRS

M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.** 10 x 2 = 20

a.	Define redox potential.
b.	Write the significance of cyclic AMP.
c.	Compare between normal and diabetic glucose levels.
d.	Write problems associated with G6PD deficiency.
e.	Define hypercholesterolemia.
f.	Write the role of 5-HT.
g.	Define allosteric enzyme.
h.	Enlist protein synthesis inhibitors.
i.	Define transamination.
j.	Write the importance of urea cycle.

SECTION B

2. **Attempt any *two* parts of the following:** 2 x 10 = 20

a.	How do you know the chemical nature of carbohydrates? Write the biological role of carbohydrates.
b.	Why citric acid cycle is important for any living organism? Justify your answer.
c.	Write the simplest way of classification of enzyme; write examples of each class also.

SECTION C

3. **Attempt any *five* parts of the following:** 7 x 5 = 35

a.	Why ATP is biologically significant molecule?
b.	Write the pathway of gluconeogenesis; when this pathway gets activated?
c.	Write the pathways of glycogen storage diseases.
d.	Write the biological significance of cholesterol.
e.	Compare the structure of DNA and RNA.
f.	Which enzymes are significant for diagnosis of cardiac problems?
g.	Write the general reactions of amino acids.

PAPER ID-311863

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2024-25
PHARMACEUTICAL ORGANIC CHEMISTRY I

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	What is ozonolysis of alkenes.
b.	Define inductive effect.
c.	Give structure and uses of cinnamaldehyde.
d.	Explain why formic acid is stronger than acetic acid.
e.	What are protic and aprotic solvents.
f.	Describe esterification reaction.
g.	Outline Diels-Alder reaction of conjugated dienes.
h.	Give structure of 2-methyl-3-pentanone.
i.	What is Saytzeff rule orientation.
j.	Explain sp^2 hybridization in alkenes.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Explain kinetics, order of reactivity of alkyl halides, stereochemistry and rearrangement of carbocations regarding SN1 and SN2 reactions.
b.	Illustrate mechanism of Markownikoff's and anti Markownikoff's addition reactions of alkenes
c.	In E1 and E2 reactions, discuss mechanism, kinetics, factors affecting and differences between both reactions

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain factors affecting stability of conjugated dienes.
b.	Write reaction and mechanism of Aldol and Perkin condensation.
c.	Explain Structural isomerism in organic compounds.
d.	Discuss the acidity of aliphatic carboxylic acids and effect of substituents on their acidity.
e.	Write a note on methods of preparation and reactions of aliphatic amines.
f.	How to distinguish between primary secondary and tertiary alcohols
g.	Write short note on Structure and Uses of Benzyl alcohol, Acetone and Aspirin.

PAPER ID-311422

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2024-25
PATHOPHYSIOLOGY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Quote various types of necrosis.
b.	Summarize the terms "hypoxia and Ischemia".
c.	Recall various types of Anginapectoris.
d.	Enumerate the causes of Bronchitis.
e.	Differentiate between the terms "Graves' Disease and Addison's Disease".
f.	Recite the various types of Diabetes.
g.	Illustrate various types of IBD.
h.	Classify various types of Hepatitis.
i.	Recite the causative organisms of Typhoid.
j.	Recall various types of Leprosy.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Differentiate intrinsic and extrinsic pathways of Apoptosis.
b.	Summarize the pathogenesis and symptoms of Epilepsy and Depression.
c.	Explain various types of Tumors and its pathogenesis.

SECTION C

3. Attempt any *five* parts of the following: **5 x 7 = 35**

a.	Describe the mechanism of reversible and irreversible cell injury.
b.	Classify various types of plasma derived mediators in acute inflammation.
c.	Explain various factors involved in the pathogenesis of Hypertension.
d.	Differentiate the pathogenesis of Asthma.
e.	Compare the causes, symptoms and clinical manifestations of Peptic Ulcer diseases.
f.	Explain various factors involved in the pathogenesis of Osteoarthritis.
g.	Appraise the causative organism, pathogenesis and symptoms of Syphilis and Gonorrhoea.

PAPER ID-311577

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2024-25
BIOCHEMISTRY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Differentiate between the endergonic and exergonic reactions.
b.	What is ketoacidosis?
c.	Discuss the symptoms of hypercholesterolemia.
d.	What is transamination?
e.	State the biological role of carbohydrates.
f.	Discuss the enzyme inhibitors with examples.
g.	Recall the applications of isoenzymes.
h.	Define hyperuricemia and gout disease.
i.	Write about the coenzymes.
j.	Define the term isoenzymes.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Explain the pathway, energetics, and significance of the citric acid cycle.
b.	Write about the genetic code and its features.
c.	Discuss the process of oxidative phosphorylation & its mechanism

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain the structure of DNA
b.	Write about the glycolysis pathway.
c.	Explain the urea cycle and its disorders.
d.	Describe the electron transport chain (ETC) and its mechanism.
e.	Explain the HMP shunt and its significance.
f.	Describe the hormonal regulation of blood glucose levels and diabetes mellitus.
g.	Give a short note on nomenclature and IUBMB classification of enzymes.

PAPER ID-311961

Roll No: | | | | | | | | | | | | |

BPHARM
(SEM II) THEORY EXAMINATION 2024-25
HUMAN ANATOMY AND PHYSIOLOGY II

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	What is the primary function of electrophysiology in the human body?
b.	What is the main difference between afferent and efferent nerve tracts in terms of the direction of signal transmission?
c.	What is the role of Creatinine Phosphate in the body?
d.	What is the purpose of artificial respiration?
e.	How does the Renin-Angiotensin System (RAS) affect kidney function?
f.	What is a second messenger, and what role does it play in hormone signaling?
g.	How does myasthenia gravis relate to the thymus?
h.	How does the parasympathetic nervous system influence acid production in the stomach?
i.	What is the difference between lung volume and lung capacity?
j.	What is the main function of the pituitary gland?

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	What is the significance of the stomach's mucosal lining and its protective mechanisms?
b.	Explain how the different lobes of the cerebral cortex contribute to various cognitive and sensory processes.
c.	Describe the structural organization of the lungs, including the branching pattern of the airways and the functional units where gas exchange occurs.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	What role does myelination play in the conduction speed of nerve fibers?
b.	How does the arachnoid mater contribute to the protection of the central nervous system?
c.	How does the structure of the lungs, including alveoli, maximize gas exchange?
d.	What is the primary role of ATP in cellular processes, and how does its unique structure contribute to this function?
e.	Describe the gross anatomy of the urinary tract, listing the major organs and their functions.
f.	How does the thyroid gland contribute to the body's overall metabolism and energy regulation?
g.	Explain the role of messenger RNA (mRNA) in protein synthesis. How is the information encoded in mRNA used to determine the amino acid sequence of a protein?