

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, October 2024

Subject: Pathophysiology

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define the following terms
(a) Hypertrophy (b) Acidosis
2. What are signs and symptoms of asthma?
3. Define gout and write its symptoms
4. What is diabetes? How it is caused?
5. Define the following terms
(a) Haemophilia (b) Sickle cell anaemia
6. Mention the types of anaemia.
7. What are the patterns of cell death?
8. What is Jaundice?
9. Differentiate between asthma and COPD.
10. What are different types of STD's and their causative agents?
11. Define cell death acidosis and calcification.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Describe pathogenesis of depression in detail.
12. Define hypertension. Discuss etiology and pathogenesis of hypertension.
13. Define cell injury. Explain the mechanism of cell injury.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write a note on metaplasia.
15. Discuss briefly about electrolyte balance.
16. Explain the pathogenesis of asthma.
17. Discuss the pathogenesis of anaemia.
18. Explain the role of H. Pylori in peptic ulcer.
19. Write a note on chemical mediators of acute inflammation.
20. Explain the pathogenesis of osteoporosis.
21. Discuss alcoholic liver disease in detail.
22. What is the role of hypertrophy in congestive heart failure?

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, September 2024
Subject: Pharmaceutical Organic Chemistry-I

Time: 3 Hours

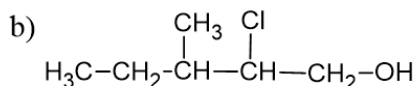
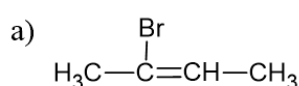
Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define the terms: Electrophile and Homologues
2. Write the IUPAC names for the following structures:



3. Explain sp^2 hybridization with an example.
4. What is peroxide effect?
5. Classify alcohols with examples.
6. Write the structure and uses of chloroform.
7. Explain benzoin condensation with an example.
8. Write the structure and uses of vanillin.
9. Write the structure and uses of citric acid.
10. Write the structure and uses of amphetamine.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Explain the mechanism involved in Cannizzaro condensation and crossed- Cannizzaro condensation with relevant examples.
12. Explain the mechanism, kinetics and stereochemistry involved in SN^2 reactions of alkyl halides.
13. (a) Explain Markovnikov's addition of alkenes with special emphasis on stability of carbocations. 6 M
(b) Explain 1,2/1,4-addition reactions of conjugated dienes. 4 M

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write the IUPAC rules for alcohols with suitable examples.
15. Describe various types of structural isomerism.
16. Explain the mechanism involved in free radical substitution reactions of alkanes with example.
17. Differentiate between E1 and E2 reactions.
18. Explain the acidity of carboxylic acids with special emphasis on the effect of substituents on their acidity.
19. Write any two qualitative tests to differentiate various classes of alcohols.
20. Explain the mechanism involved in the aldol condensation with examples.
21. Describe the Hinsberg method of separation of amines with examples.
22. Write any three qualitative tests for carbonyl compounds.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, September 2024

Subject: Biochemistry

Time: 3 Hours

Max.Marks:75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What are holoenzymes? Give examples.
2. Write the uncouplers of ETC.
3. What is denaturation and renaturation of proteins?
4. What are isoenzymes? Give examples.
5. What is albinism?
6. Write the biological significance of proteins.
7. Write the types of diabetic mellitus.
8. What are okazaki fragments?
9. Define free energy and redox potential.
10. What is Gout?

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Explain the various reactions involved in the Citric acid cycle.
12. Write the biological significance of cholesterol and explain the conversion of cholesterol into bile acids.
13. Explain the biosynthesis of pyrimidine nucleotides in the body.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Explain the synthesis of bile acids.
15. Give the reaction sequence in HMP shunt.
16. Give the salient features of Genetic code.
17. Explain disorders of lipid metabolism.
18. Give biological significance of ATP and Cyclic AMP.
19. Explain Glycogenesis and Glycogenolysis.
20. Describe the process of transcription.
21. Discuss about urea cycle.
22. Write the synthesis and significance of dopamine.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, September 2024

Subject: Human Anatomy Physiology - II

Time: 3 Hours

Max.Marks:75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write the differences between parasympathetic and sympathetic nervous systems.
2. Define reflex and reflex arc. Discuss the functional components of reflex arc.
3. Write the composition and functions of saliva.
4. Write the composition and functions of pancreatic juice.
5. What is the difference between lung volume and lung capacity.
6. Explain resuscitation methods.
7. Explain metabolic acidosis and alkalosis.
8. Write the functions of posterior pituitary gland.
9. Discuss the functions of testosterone, estrogen and progesterone.
10. Explain the structure of chromosome.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Enumerate the events in detail in the process of respiration.
12. Explain spermatogenesis and oogenesis in detail.
13. (a) List out the different components of pituitary gland and enumerate the functions of each component.
(b) Explain the structure and functions of small intestine with a neat labeled diagram.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Explain the structural components and functions of parasympathetic nervous system.
15. Enumerate the steps involved in neurohumoral transmission.
16. Discuss the structure and functions of thymus with a neat labeled diagram.
17. Discuss the role of kidneys in acid base balance.
18. Give a detailed note on structure and functions of pancreas.
19. Discuss the structure and functions of female reproductive system with a neat labeled diagram.
20. Describe the structure and functions of nephron in detail with a neat labeled diagram.
21. Explain protein synthesis in detail.
22. Enumerate events in internal respiration in detail.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, October 2024

Subject: Environmental Sciences

Time: 2 Hours

Max. Marks: 50

PART – A

Note: Answer any two questions from the following. (2 x 10 = 20 Marks)

1. Explain the concept of ecosystem. Give the structure and functions of ecosystem. Briefly explain any two ecosystems.
2. What are the causes of water pollution? What are the measures to be taken to reduce water pollution?
3. Explain aquatic ecosystems in detail.

PART – B

Note: Answer any five questions from following. (6 x 5 = 30 Marks)

4. Explain any 5 sources of air pollution.
5. Explain the causes of soil pollution?
6. What are the different mineral resources? List the environmental problems and economical importance of minerals with suitable examples.
7. Explain the structure and functions of forest ecosystem.
8. Briefly explain the forest resources.
9. Explain the various renewable resources.
10. What are the different types of deserts? Explain the adaptation of plants and animals for desert life.
11. Explain in detail the structure and functions of ecosystem. What is the importance of ecosystem?

FACULTY OF PHARMACY

B. Pharmacy IV - Semester (PCI) (Main & Backlog) Examination, October 2024

Subject: Pharmacology - I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What is dose response relationship? What are its advantages?
2. Define Bioavailability. Why the bioavailability of drugs is lower after oral administration.
3. Discuss the concept of first pass metabolism with examples.
4. Enlist the drugs used in glaucoma.
5. What is vasomotor reversal of Dale?
6. Define plasma half life. Mention its significance.
7. Mention the uses of pre-anesthetic medication.
8. Name excitatory neurotransmitters present in CNS.
9. Mention the therapeutic uses and adverse reactions of benzodiazepines.
10. What is drug addiction? Give examples.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. What is Alzheimer's disease? Classify drugs used in Alzheimer's disease and explain the mechanism of action, adverse effects and therapeutic uses of cholinergic activators.
12. Classify antiepileptic drugs. Explain the mechanism of action, adverse effects and uses of hydantoins and aliphatic carboxylic acids.
13. (a) Write the pharmacological actions of adrenaline.
(b) Explain the various therapeutic uses and adverse reactions of β -adrenergic blockers.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Describe the three major effector pathways through which G-protein coupled receptors function.
15. Discuss about pharmacokinetic drug interactions with suitable examples.
16. Explain in detail about phase-I biotransformation of drugs with examples.
17. Write the pharmacological actions of alcohol.
18. Mention the mechanism of action and uses of local anesthetic agents.
19. Classify neuromuscular blockers with examples. Write the mechanism of action, adverse effects and therapeutic uses of curare alkaloids.
20. Write about the mechanism and stages of general anesthesia.
21. Discuss in detail the pharmacological actions of morphine.
22. Classify antiParkinson's drugs with examples. Write the mechanism of action and adverse effects of dopamine precursor.

Code No: F-7165/PCI

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Backlog) Examination, March 2024

Subject: Human Anatomy and Physiology-II

Time: 3 Hours

Max Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write the function of cerebrospinal fluid.
2. What is the role of enzymes in digestion?
3. Write a note on posterior pituitary hormones.
4. Define receptors. List the type of receptors.
5. Enlist the resuscitation methods?
6. Enlist the functions of male reproductive system.
7. Draw the neat labelled diagram of stomach.
8. List the disorders of kidney.
9. Write the functions of female sex hormones.
10. Define (a) Gene (b) Parturition.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write a note on lung volumes and capacities with the help of Spiro graph and neat labelled diagram of spirometer.
12. Discuss about Anatomy of male and female reproductive system.
13. Discuss about the structure and function of brain with the help of diagram.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. What are the three ways that ATP can be generated?
15. Explain how respiratory areas control respiration.
16. Discuss about the adrenal gland.
17. Write about genetic pattern of inheritance.
18. Write a note on mechanism of hormone action
19. Write a note on components of reflex arc.
20. Define neurotransmitter. Add a note on biogenic amines.
21. Discuss about the physiology of urine formation.
22. Write a note on physiology of menstruation.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Backlog) Examination, March 2024

Subject: Environmental Sciences

Time: 2 Hours

Max. Marks: 50

PART-A

Note: Answer any two questions.

(2 x 10 = 20 Marks)

1. What are the causes of air pollution? What are the measures to be taken to reduce air pollution?
2. a) Explain the forest resources in detail.
b) What is the role of an individual in the conservation of natural resources? (6+4)
3. Classify aquatic ecosystems and explain each one in detail.

PART-B

Note: Answer any six questions.

(6 x 5 = 30 Marks)

4. Explain the mineral resources. What are the health problems due to the mining of minerals?
5. Explain in detail the structure and functions of ecosystem.
6. What are the reasons for soil pollution? What is its impact on the health?
7. What are the various water resources? Add a note on the conservation of water resources.
8. Explain any 5 sources of water pollution.
9. What are the different types of deserts? Explain the adaptation of plants and animals for desert life.
10. Explain the various grass land ecosystems.
11. List the natural resources. Differentiate between renewable and non renewable resources citing examples.

FACULTY OF PHARMACY

B. Pharmacy II – Semester (PCI) (Backlog) Examination, March 2024

Subject: Computer Application in Pharmacy

Time: 2 Hours

Max. Marks: 50

PART – A

Note: Answer any two questions.

(2 x 10 = 20 Marks)

1. Define number system. Explain the concept of One's complement and Two's complements with examples.
2. (i) Write a note on pharmacy drug database.
(ii) Explain the need of hospital and clinical pharmacy.
3. (i) What is bioinformatics? Explain its applications.
(ii) Write note on CDS (Chromatographic data systems).

PART – B

Note: Answer any six questions.

(6 x 5 = 30 Marks)

4. Explain the importance of data flow diagrams.
5. Write about syntax rules for Extensible Mark-up Language declaration.
6. Explain any 5 HTML tags with examples.
7. Explain the application of computers in Pharmacy.
8. Write about Objective of Bioinformatics.
9. Explain the importance of TIMS (Text Information Management Systems).
10. Explain the importance of process life cycle of software.
11. Explain the process of Medication monitoring.

FACULTY OF PHARMACY
B. Pharmacy II - Semester (PCI) (Backlog) Examination, March 2024
Subject: Pathophysiology

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What are causes of cell injury?
2. Mention the parts of heart.
3. What are the causes of hepatitis B?
4. Define (a) Myocarditis (b) Cardiomyopathy
5. Distinguish between exocrine and endocrine gland.
6. What is neoplasm? List out the types of neoplasms.
7. Differentiate Atherosclerosis & Arteriosclerosis.
8. Explain alcoholic liver disease.
9. Define osteoporosis and osteoarthritis.
10. What are different types of stroke?

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write briefly about the principle of wound healing in the skin.
12. Discuss neural basis of epilepsy. Add a note on types of epilepsies.
13. Explain in detail various cellular events of inflammation.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. What is Alzheimer disease? Enumerate its signs and symptoms.
15. Discuss the pathogenesis of tuberculosis.
16. What is ischemic heart disease? Explain its types.
17. Describe the pathophysiology of meningitis.
18. What are peptic ulcers? Discuss pathophysiology.
19. Describe the causes and symptoms of AIDS.
20. Mention aetiology and symptoms of inflammatory bowel disease.
21. Define homeostasis. Write various components of feedback system.
22. Explain the aetiology and pathogenesis of acute renal failure.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Backlog) Examination, March 2024

Subject: Biochemistry

Time: 3 Hours

Max.Marks:75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define isoenzyme with examples.
2. What is denaturation and renaturation of proteins?
3. What are cofactors? Give examples.
4. What is alkeptonuria?
5. Write the inhibitors of ETC.
6. Write any two biochemical functions of cholesterol.
7. Define nucleosides and nucleotides.
8. What is Gout?
9. What are okazaki fragments.
10. Define free energy and redox potential.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Describe the reactions involved in the de novo biosynthesis of fatty acids.
12. Explain citric acid cycle.
13. Explain the biological significance of Cholesterol and write the conversion of cholesterol into bile acids.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Explain the synthesis of bile acids.
15. Describe the structure and functions of tRNA.
16. Give the salient features of Genetic code.
17. Explain disorders of lipid metabolism.
18. Give biological significance of ATP and Cyclic AMP.
19. Explain Glycogenesis and Glycogenolysis.
20. Write the chemical classification of amino acids.
21. Write the synthesis and significance of melatonin.
22. Discuss about urea cycle.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Backlog) Examination, March 2024

Subject: Pharmaceutical Organic Chemistry-I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define the terms: Nucleophile and Homologues.
2. Write the structure for the following compounds: 2-Chloro-but-2-ene, 3-Methyl-2-pentanol.
3. Define 'free radical'. Explain its formation with an example.
4. Classify alkadienes with examples.
5. Explain the significance of the esterification test.
6. Write the structure and uses of chloroform.
7. Explain perkin condensation with an example.
8. Write the structure and uses of hexamine.
9. Write the structure and uses of amphetamine.
10. Explain the significance of tollen's test.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Describe structural isomerism with examples.
12. Explain the mechanism, kinetics and stereochemistry involved in SN¹ reactions of alkyl halides.
13. Explain the acidity of carboxylic acids with special emphasis on the effect of substituent on their acidity. Write the structure and uses of benzoic acid and acetyl salicylic acid.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write the IUPAC rules for alkenes with suitable examples.
15. Explain about halogenation of alkanes with examples.
16. Explain Markovnikov's addition of alkenes with special emphasis on stability of carbocations.
17. Describe the mechanism and stereochemistry of SN² reactions.
18. Write any two qualitative tests to differentiate various classes of alcohols.
19. Explain the mechanism involved in the Cannizzaro reaction with examples.
20. Describe the Hinsberg method of separation of amines with examples.
21. Write any two methods of preparation each for aliphatic amines and carboxylic acids.
22. Explain the mechanism involved in the nucleophilic addition reactions of carbonyl compounds with an example.