

QP Code: 223006

Reg. No.....

**Second Semester B. Pharm Degree Supplementary Examinations
February 2026
Biochemistry
(2017 and 2024 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Discuss about enzyme kinetics
2. Describe the pathway, energetics and significance of Citric acid cycle

Short Notes

(7x5=35)

3. Biological significance of ATP and cAMP
4. Glycogen storage diseases
5. Urea cycle
6. Diagnostic applications of enzymes
7. Structure of DNA and their functions
8. Electron transport chain and its mechanism
9. Catabolism of heme

Answer Briefly

(10x2=20)

10. Significance of 5-HT
11. Genetic code
12. Phenylketonuria
13. Uncouplers of electron transport chain
14. Biochemical functions of Coenzymes
15. Energetics of glycolysis
16. Conversion of cholesterol to Vitamin D
17. Hyperuricemia
18. Enzyme repression
19. Redox potential

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**Second Semester B. Pharm Degree Supplementary Examinations
February 2026**

**Human Anatomy and Physiology II
(2017 and 2024 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays

(2x10=20)

1. Discuss the gross structure of spinal cord. Add a note on reflex action
2. Enumerate in detail the process of protein synthesis

Short Notes

(7x5=35)

3. Structure of neuron
4. Functions of Liver
5. Formation and role of ATP
6. Structure of nephron
7. Parathyroid hormone
8. Spermatogenesis
9. Mechanism of breathing

Answer Briefly

(10x2=20)

10. Insulin
11. Astrocytes
12. Vital capacity
13. Neurotransmitters
14. Tongue
15. Pineal gland
16. Renin
17. Aldosterone
18. Ventricles of brain
19. mRNA

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**Second Semester B. Pharm Degree Supplementary Examinations
February 2026**

**Pathophysiology
(2017 and 2024 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Explain in detail about the mechanisms of cellular adaptation
2. With neat illustration, explain pathophysiology of rheumatoid arthritis

Short Notes

(7x5=35)

3. Explain the etiology and pathogenesis of myocardial infarction
4. Write the etiopathogenesis and clinical presentations of diabetes mellitus
5. Explain the causes of cell injury
6. Describe the pathophysiology of atherosclerosis
7. Write the etiology and pathophysiology of chronic obstructive pulmonary disease
8. Describe the pathophysiology of alcoholic liver disease
9. Explain the mechanisms of acute and chronic inflammation

Answer Briefly

(10x2=20)

10. What are the factors influencing wound healing
11. Discuss the etiology and pathophysiology of ulcerative colitis
12. Write the pathophysiology of Alzheimer's diseases
13. What are symptoms of schizophrenia
14. Write the etiopathogenesis of hypertension
15. Write the pathophysiology of typhoid
16. Write the difference between benign and malignant tumours
17. What are various types of urinary tract infections
18. Discuss the pathogenesis of Acquired Immunodeficiency Syndrome (AIDS)
19. Write pathophysiology of meningitis

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**Second Semester B. Pharm Degree Supplementary Examinations
February 2026
Pharmaceutical Organic Chemistry I
(2017 and 2024 Scheme)**

Time: 3 Hours

Max. Marks: 75

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

Essays

(2x10=20)

1. a) Explain the mechanism, kinetics and stereochemistry of SN_2 reaction.
b) What are the factors affecting SN_2 reaction
2. Explain Cannizzaro and Crossed Cannizzaro's reaction with examples.

Short Notes

(7x5=35)

3. Write the structure and uses of citric acid, succinic acid and oxalic acid.
4. Explain the basicity of amines and effect of substituents on it.
5. Classify organic compounds with examples.
6. Give the general formula for the following functional groups:
a) Carboxylic acid b) Alcohol c) Amines d) Alkyl halides e) Aldehydes
7. Explain halogenation of alkanes with mechanism
8. What are the factors affecting E_1 and E_2 reaction and differentiate between E_1 and E_2 reaction.
9. Distinguish between SN_1 and SN_2 reaction.

Answer Briefly

(10x2=20)

10. Give the IUPAC names for the following: a) formic acid b) acetone
11. Write the structural formulas for,
a) 2-methyl -3-hexanol b) 3-methyl-2-butanone
12. What is the peroxide effect.
13. Write a note on ozonolysis of alkenes.
14. Write the structure and uses of ethyl alcohol and methyl alcohol.
15. Give two qualitative tests for alcohol.
16. Give the structure and uses of hexamine and benzaldehyde.
17. What is Electromeric effect.
18. Give the structure and uses of ethanolamine and ethylenediamine.
19. Explain the structure and uses of amphetamine and benzyl benzoate.
