

Sr.No.7953

Exam Code: 106701
Subject Code : 001031

Bachelor of Physiotherapy - 1st Yr.
(Old Syll Batch 2023-27)
(2224)

Paper-III: Biochemistry

Time Allowed: 3hrs.

Max. Marks: 100

NOTE- Attempt FIVE questions in all selecting at least ONE question from each section. The FIFTH question can be attempted from any section. All questions carry equal marks.

SECTION A

1. (a) What is a Cell? Illustrate a well-labelled diagram of the cell. 10
(b) Describe the cell structure and organelles in detail. 10
2. (a) Write a note on Mucopolysaccharide connective tissue proteins. 10
(b) What is osmotic pressure? Describe the renal regulation of acid-base equilibrium in the body. 10

SECTION B

3. What are Carbohydrates? Explain in detail about the classification of carbohydrates. 20
4. (a) Write about essential fatty acids. Discuss their importance. 10
(b) Discuss the importance of cholesterol. 10

SECTION C

5. What are Vitamins? Classify Vitamins and write about fat-soluble vitamins. 20
6. (a) Define Enzymes and what are the factors affecting enzyme actions. 10
(b) Write in detail about thyroid hormone. 10

SECTION D

7. Explain:
(a) Glycolysis 10
(b) Krebs Cycle 10
8. Write in detail about
(a) Fatty Acid Oxidation 10
(b) Metabolism of cholesterol 10

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Bachelor in Physiotherapy - 1st Year (B.P.T.)

(Batch 2023-27)

(2524)

Paper-III: Biochemistry

Time Allowed: 3 hrs.

Max. Marks: 100

Note :- Attempt FIVE questions in all selecting at least ONE question from each section (A-D) and the FIFTH question from any of the sections. All questions carry equal marks.

		Marks
Section-A		
I	(a) Describe renal regulation of acid-base equilibrium in body?	10
	(b) What mechanisms govern the balance of Na^+ and K^+ in the body?	10
II	(a) Write a note on connective tissue proteins?	10
	(b) What are the types of glial cells in PNS and CNS? Give their functions.	10
Section-B		
III	(a) Classify carbohydrates based on their chemical structure and properties?	10
	(b) Explain secondary structure of protein with the help of an example.	10
IV	(a) What are essential fatty acids? Discuss their importance.	5
	(b) What are blood lipids? Give their functions.	10
	(c) What are conjugated proteins? Give examples.	5
Section-C		
V	(a) What are the factors affecting enzyme action?	5
	(b) Explain clinical importance of enzymes?	5
	(c) Write in detail about water soluble vitamins?	10
VI	(a) What do you understand by calcium homeostasis?	5
	(b) Write a brief note on insulin.	5
	(c) What hormones does the adrenal gland produce? What are their respective roles in the body?	10
Section-D		
VII	(a) Explain glycolytic pathway of carbohydrate metabolism? Give metabolic fate of pyruvate.	10
	(b) What is biological oxidation? Explain electron transport chain.	10
VIII	(a) How cholesterol biosynthesis takes place? Give importance of cholesterol.	10
	(b) What is the fate of ammonia during amino acid catabolism? Explain urea cycle.	10

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Sr.No.8203

Exam Code: 106701
Sub. Code : 001031

Bachelor of Physiotherapy - Ist Year (B.P.T.) (Old Syllabus)
(Batch 2024-28)
(2225)

Paper-III : Biochemistry

Time allowed: 3 hrs.

Max. Marks: 100

Note: Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A

1. Explain the structure and functions of:
 - i. Cell membrane
 - ii. Endoplasmic reticulum.
2. Write a note on Nerve tissue, explain its Composition and chemical mediators of Nerve activity.

Section B

3. Explain the major types and nutritional importance of carbohydrates. Add a note on sources of different types of carbohydrates.
4. Write a note on:
 - a. Blood lipids and cholesterol
 - b. Classification of proteins

Section C

5. Write short notes on: (a) Vitamin A, (b) Vitamin D; their sources, functions, and deficiency symptoms.
6. Define Hormones. Describe the role of the insulin, glucagon and thyroid hormones in detail.

Section D

7. Explain and draw the following pathways:
 - A. Glycolysis
 - B. HMP Shunt pathway
8. A. Explain the β -oxidation of fatty acids in detail.
B. Explain the process of Urea Synthesis.

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Sr.No.8003

Exam Code: 106701
Subject Code : 001031

Bachelor in Physiotherapy – 1st Year (B.P.T.) (Batch 2024-28)
(2525)

Paper-III: Biochemistry

Time allowed: 3 hrs.

Max. Marks: 100

NOTE- Attempt FIVE questions in all selecting at least ONE question from each section. The FIFTH question can be attempted from any section. All questions carry equal marks.

SECTION A

1. (a) Define Isotopes, Electrolytes & Osmotic Pressure? Discuss the role of isotopes in the treatment and diagnosis of disease. 10
(b) Describe the cell structure and organelles in detail. Draw a well-labelled diagram of the cell. 10
2. (a) Write a note on the Composition of Nerve Tissue along with a diagram. 10
(b) Explain in detail the Chemical Mediators of Nerve Activity. 10

SECTION B

3. (a) Define Carbohydrates. Explain in detail about the classification of carbohydrates along with chemical structures. 10
(b) Write about digestion and absorption of carbohydrates, and enlist functions and sources of carbohydrates. 10
4. (a) Write about essential fatty acids. Discuss their importance. 10
(b) Discuss the importance of cholesterol. 10

SECTION C

5. (a) Classify Vitamins and write in detail about Fat Soluble Vitamins 10
(b) Write a note on Vitamin A & Vitamin D deficiency 10
6. (a) Define Enzymes and what are the factors affecting enzyme actions. 10
(b) Write a detailed note on Insulin and Glucagon. 10

SECTION D

7. Explain in detail about:
(a) Glycolysis & HMP shunt 10
(b) Citric Acid Cycle 10
8. Write in detail about
(a) Transamination & Deamination, Glycogenolysis 10
(b) Urea Cycle 10

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