

Code: 17T00103

Pharm.D I Year Regular & Supplementary Examinations November/December 2022

MEDICINAL BIOCHEMISTRY

(For 2017, 2018, 2019, 2020 & 2021 admitted batches only)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- | | |
|---|----|
| (a) Write a biological significance of cyclic AMP. | 2M |
| (b) Write the IUB classification for enzymes. | 2M |
| (c) Mention the significance of HMP shunt. | 2M |
| (d) Define beta oxidation with suitable example. | 2M |
| (e) Write the metabolic disorders of urea cycle. | 2M |
| (f) What is DNA repair mechanism? | 2M |
| (g) Give any one quantitative test for kidney. | 2M |
| (h) Write any one important test for hepatic function test. | 2M |
| (i) Outline the various functions of lipoproteins. | 2M |
| (j) Define RIA with suitable example. | 2M |

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

- | | | |
|-----------|---|-----|
| 2 | Discuss in detail isoenzymes and their therapeutic applications. | 10M |
| OR | | |
| 3 | Write in detail coenzymes and their biochemical role and deficiency diseases. | 10M |
| 4 | Explain in detail Citric Acid Cycle (TCA cycle). | 10M |
| OR | | |
| 5 | Discuss in detail biosynthesis of fatty acids. | 10M |
| 6 | Write short notes on electron transport chain. | 10M |
| OR | | |
| 7 | (a) Explain the catabolism of amino acids. | 5M |
| | (b) Discuss in brief the DNA replication. | 5M |
| 8 | Write the macroscopic and semi quantitative tests for urine analysis. | 10M |
| OR | | |
| 9 | Write test for serum bilirubin, urine bilirubin and urine urobilinogen. | 10M |
| 10 | Explain in detail about ELISA. | 10M |
| OR | | |
| 11 | Write the liquid profile test for Cholesterol and triglycerides. | 10M |

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Pharm.D I Year Advanced Supplementary Examinations April 2022

MEDICINAL BIOCHEMISTRY

(For 2017, 2018, 2019 & 2020 admitted batches only)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define ATP and GMP.
 - (b) Define prosthetic group in enzymes.
 - (c) Define glycogenesis.
 - (d) Define ketogenesis.
 - (e) What are pyrimidines give examples?
 - (f) Define transamination by giving one example.
 - (g) What are the macroscopic tests done in urine analysis?
 - (h) Define urine concentration test.
 - (i) Define RIA and ELISA.
 - (j) Explain the biochemical role and importance of bicarbonates.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

- 2 (a) Write in brief about cell and its biochemical organization.
(b) Write in brief about ATP and mention about its biological significance.
- OR**
- 3 (a) Define enzyme and write about enzyme classification.
(b) Write about isoenzymes and mention their therapeutic and diagnostic applications.

- 4 (a) With neat sketch, explain about Citric Acid (TCA) cycle.
(b) Define ketolysis.

OR

- 5 (a) Write in brief about β -oxidation.
(b) Discuss about the metabolic disorders associated with carbohydrate metabolism.

- 6 (a) Discuss about the various catabolic reactions of amino acids.
(b) Write about oxidative phosphorylation.

OR

- 7 (a) Discuss about the protein synthesis.
(b) Write in brief about protein turn over and nitrogen balance.

- 8 (a) Write in detail about urine analysis in kidney function test.
(b) Discuss about the selected enzyme tests for liver function.

OR

- 9 (a) Write about the tests for presence of NPN constituents in urine.
(b) Write the principle, procedure and application involved in the estimation of serum bilirubin.

- 10 (a) Write the principle and procedure involved in the determination of serum total cholesterol and triglycerides.
(b) Write in brief about the determination of sodium in body fluids.

OR

- 11 (a) Write the procedure involved in the determination of hormone levels in serum using ELISA.
(b) Write in brief about the biochemical role and determination of potassium in body fluids.

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Pharm.D I Year Regular & Supplementary Examinations December 2021

MEDICINAL BIOCHEMISTRY

(For 2017, 2018, 2019 & 2020 admitted batches only)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Define NADP and FAD.
 - Define isoenzyme.
 - What are the different metabolic disorders of carbohydrate metabolism?
 - Write about fatty liver condition.
 - What are purines? Give examples.
 - Define decarboxylation of amino acids by giving one example.
 - Write about the principle involved in the determination of serum bilirubin.
 - Write about the NPN constituents.
 - Define HDL and LDL.
 - Write in brief about the biochemical role of sodium.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

- Write in brief on cyclic AMP and mention their biological role.
 - Write in brief about the transport process involved across the cell membranes.
- OR
- Explain about the factors affecting enzyme activity.
 - Write in brief about coenzyme. Explain about their biochemical role and deficiency diseases.
- Define glycolysis. Write about its pathway with neat sketch.
 - Write in brief about the defective metabolism of lipids.
- OR
- Discuss about the metabolism of cholesterol.
 - Write a short note on glucose tolerance test.
- Discuss about the electron transport chain.
 - Write about urea cycle with neat diagram.
- OR
- Outline the biosynthesis of bile pigments.
 - Write about the metabolism of purine nucleotide.
- Write the principle and procedure involved in the determination of blood and urea creatinine.
 - Write the principle, procedure and application involved in the estimation of urine bilirubin.
- OR
- Write in detail about the test for hepatic dysfunction.
 - Write the principle and procedure involved in the determination of uric acid.
- Write the principle and procedure involved in the determination of serum lipids and LDL cholesterol.
 - Write in brief about the determination of calcium in body fluids.
- OR
- Write the procedure involved in the determination of hormone levels in serum using RIA.
 - Write in brief about the biochemical role and determination of chlorides in body fluids.

MEDICINAL BIOCHEMISTRY

(For 2017, 2018 & 2019 admitted batches only)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define enzymes.
 - (b) What do you mean by active transport?
 - (c) Explain glycolysis.
 - (d) Give the structures of: (i) Glucose. (ii) Fructose.
 - (e) What are co-enzymes?
 - (f) Give two examples of oxidative phosphorylation.
 - (g) What do you mean by Creatinine/Urea clearance?
 - (h) Give the test for Urea/Uric acid.
 - (i) Outline the functions of cholesterol.
 - (j) Define the term total cholesterol.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

- 2 (a) What are the factors affecting enzyme activity?
(b) Give the structures of ATP, cyclic AMP and their biochemical significance.
- OR**
- 3 (a) Give the detailed classification of enzymes.
(b) What do you mean by competitive and non-competitive enzyme inhibition?
- 4 (a) Outline the TCA cycle.
(b) Give briefly the factors affecting glycolysis.
- OR**
- 5 (a) Explain the metabolic disorders of carbohydrate metabolism.
(b) What is glucose tolerance test?
- 6 (a) Write in detail about electron transport chain.
(b) What do you mean by uncouplers of ETC?
- OR**
- 7 (a) Explain in detail the Amino-acid catabolism.
(b) What is Nitrogen balance?
- 8 (a) Explain the significance of clinical chemistry lab.
(b) Give a brief description of cell-malfunction with examples.
- OR**
- 9 (a) Write about tests for NPN constituents.
(b) Explain urine concentration test.
- 10 Write in detail immunochemical tests for hormonal imbalance. Give a relevant example.
- OR**
- 11 (a) What are lipoproteins? Explain in detail.
(b) How to determine serum lipoproteins?

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Pharm.D I Year Regular Examinations July/August 2018

MEDICINAL BIOCHEMISTRY

(For 2017 admitted batches only)

Time: 3 hours

Max. Marks: 70

PART - A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write biological significance of cyclic AMP.
 - (b) Define and explain isoenzyme.
 - (c) Write a note on lipid metabolism.
 - (d) Explain hypercholesterolemia.
 - (e) Write a note on urine concentration test.
 - (f) Describe enzyme inhibition.
 - (g) Write biological significance of ATP.
 - (h) Explain atherosclerosis.
 - (i) Explain metabolic disorder of amino acids.
 - (j) Define and explain coenzyme.

PART - B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT - I

- 2 Write a note on cell and transport system across the cell membrane.
- OR
- 3 Explain IUB classification of enzyme and deficiency diseases of enzymes.

UNIT - II

- 4 Write a detailed note on glycogenolysis.
- OR
- 5 Explain about glyconeogenesis in detail.

UNIT - III

- 6 Explain biological oxidation and coenzymes involved in explain biological oxidation.
- OR
- 7 Give a detailed account on protein synthesis.

UNIT - IV

- 8 Explain cell composition and malfunction.
- OR
- 9 Write a detailed note on liver function test.

UNIT - V

- 10 Write a note on determination electrolyte in the body.
- OR
- 11 Explain ELISA and Radio immune assay in detail.

Code: 17T00103

Pharm.D I Year Regular & Supplementary Examinations July/August 2019

MEDICINAL BIOCHEMISTRY

(For 2017 & 2018 admitted batches only)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Write function of nucleus and mitochondria.
 - Give any two chemical aspects of human life in health and illness.
 - Define isoenzyme. Give its importance in diagnosis of disease, give diagnosis application enzyme.
 - Define the terms with examples: (i) Mutation. (ii) Replication.
 - What are enzymes, classify with examples?
 - What is Galactose tolerance test?
 - Explain role of kidney. Give kidney function test.
 - Give functions of liver and also give two names of prominent liver test.
 - What are lipoproteins? Give their significance.
 - Explain glucose tolerance test.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

- 2 Elaborate various aspects of clinical chemistry with regards to human health and illness.
- OR**
- 3 Discuss with application of chemical laboratory methods to diagnosis, control of treatment and prevention of diabetes.
- 4 (a) Explain the term 'Metabolic process of biomolecules' in health and illness.
(b) Write a short note on protein synthesis.
- OR**
- 5 What is 'Metabolic disorder', write a note on 'Type II diabetes' and its drug treatment.
- 6 (a) What is cell, give its various constituents.
(b) Write a note on 'Cyclic AMP and its biological significance.
- OR**
- 7 (a) Discuss various phase of Kerb's cycle.
(b) Explain β –oxidation of lipids.
- 8 Give physiological role of liver and explain various livers function test.
- OR**
- 9 (a) Explain urine analysis tests of kidney.
(b) Give test for NPN of constituents of kidney.
- 10 Explain in detail about RIA and ELISA in detail.
- OR**
- 11 (a) How water is distributed in different compartment of body and give water balance of normal individual?
(b) Explain immune chemical techniques for determination of human level and protein level in serum.

Code: 17T00103

Pharm.D I Year Advanced Supplementary Examinations December 2018

MEDICINAL BIOCHEMISTRY

(For students admitted in 2017 only)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write biological significance of ATP
 - (b) Enlist various transport systems across cell membrane.
 - (c) Describe enzyme inhibition.
 - (d) Define and explain coenzyme.
 - (e) Explain glucose tolerance test.
 - (f) Explain atherosclerosis.
 - (g) Explain purine and pyrimidine metabolism.
 - (h) Explain metabolic disorder of amino acids.
 - (i) Explain uric acid cycle.
 - (j) Explain fatty liver disorder.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

- 2 Write a note on cell and its biochemical organization.
- OR**
- 3 Write an account on IUB classification of enzymes and deficiency diseases of enzymes.
- 4 Write short notes on glycolysis. List main reactions of glycolytic pathway
- OR**
- 5 Discuss in detail about gluconeogenesis.
- 6 Explain biological oxidation and coenzymes involved in explain biological oxidation.
- OR**
- 7 Explain catabolism of amino acids.
- 8 Explain role of clinical chemistry laboratory.
Write short notes on cell composition and malfunction
- OR**
- 9 Write detailed notes on kidney function test.
- 10 Explain lipid profile test.
Give an account on electrolytes in the body.
- OR**
- 11 Explain ELISA and radio immune assay.

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Pharm.D I Year Advanced Supplementary Examinations January 2018

MEDICINAL BIOCHEMISTRY

(For 2016 and prior to 2016 admitted batches only)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Classify enzymes with suitable examples and explain competitive and un-competitive enzyme inhibition.
- 2 Explain about:
 - (a) Gluconeogenesis.
 - (b) Diabetes mellitus.
- 3 Give an account on:
 - (a) β – oxidation.
 - (b) Hypercholesterolemia.
- 4 Write short notes on:
 - (a) Metabolic disorder of amino acids.
 - (b) Protein turnover.
- 5 Explain about:
 - (a) DNA replication.
 - (b) Point mutation and frame-shift mutation.
- 6 Explain the role of liver. Also write about any three liver function tests.
- 7 Explain the role of kidney. Also write about any three kidney function tests.
- 8 Explain about:
 - (a) ELISA.
 - (b) Blood cholesterol levels.

Pharm. D I Year Regular & Supplementary Examinations July 2017

MEDICINAL BIOCHEMISTRY

(For 2016 and prior to 2016 admitted batches only)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Define and classify energy rich compounds with examples. Write the biochemical function of Cyclic Adenylate.
(b) Define enzyme inhibition. Explain different types of reversible enzyme inhibitors with examples.
- 2 (a) What is oxidative phosphorylation? Write the mechanism of chemiosmotic hypothesis of ATP formation.
(b) Outline the major bypass reactions of gluconeogenesis. Mention the non-carbohydrate precursor for glucose.
- 3 (a) Explain the oxidative reactions of pentose phosphate pathway and give its biological significance.
(b) Write a note on inhibitors of electron transport chain and uncouplers.
- 4 (a) What is cholesterol? Write the steps involved in the synthesis of cholesterol starting from squalene.
(b) Explain the reactions involved in disposal of ammonia in the body.
- 5 (a) Outline the biochemical pathway for biosynthesis of pyrimidine nucleotides.
(b) Write a note on disorders of phenylalanine metabolism.
- 6 (a) Define transcription. Explain the steps involved in transcription process.
(b) Mention the routinely performed kidney function tests and explain any two tests in detail.
- 7 (a) Explain the principle and method involved in enzyme linked immunosorbent assay (ELISA).
(b) Write a note on different types of jaundice and their clinical significances.
- 8 (a) Mention liver function tests. Explain any two tests in detail.
(b) Define coenzymes. Explain the role of flavin coenzymes with examples.
