

Medical Biochemistry Department.

Time allowed: 3hs

M.D. Medical Biochemistry Examination
Paper II (450 Marks)

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All questions must be answered :

i. Discuss the biochemical basis of each of the followings: (120 marks)

1. Von Gierk's disease
2. Hyperammonemia type II
3. Retinitis pigmentosa
4. Organ phosphorous toxicity

ii. Write on each of the followings : (100 marks)

1. Acetyl-CoA carboxylase
2. ATP synthase
3. ALA synthase
4. Xanthine oxidase

iii. Give an account on: (80 marks)

1. Cardiac troponins
2. Tumor markers used for evaluation of thyroid gland cancer and breast cancer
3. Enzymes used as diagnostic tools for liver functions
4. Creatinine clearance test

v. Discuss each of the followings: (150 marks)

1. Biochemistry of vitamin D (30 marks)
2. Impact of COVID-19 on hemoglobin (30 marks)
3. Purine salvage pathway with reference to clinical disorder associated with inborn error of this pathway (20 marks)
4. Types and importance of ubiquitination (30 marks)
5. Salient features of alpha helix, name two amino acids destabilizing alpha helix.(25 marks)
6. Biochemical bases for the mechanism of action of the following drugs (15 marks)
 - a) 5-fluorouracil
 - b) Methotrexate
 - c) Hydroxylurea

Good Luck

Tanta University

Faculty of Medicine

Date: 30-10-2021

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M.D. Medical Biochemistry Examination

Paper I (450 Marks)

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All questions must be answered :

i. Give an account of each of the followings: (150 marks)

1. Hexokinases in health and disease
2. Scavenger receptors and their role in intermediary metabolism
3. Tryptophan hydroxylases and their relation to neuropsychiatric disorders
4. Selenoproteins
5. Dolicol phosphates

ii. Write short notes on the following items (240 marks)

1. Crisper
2. Tumor suppressor gene
3. Mismatch repair and its clinical correlation
4. V(D) J recombinase enzymes
5. Uses of monoclonal antibodies in medical biochemistry
6. Reporter gene
7. Warburg effect ;definition, mechanism and its clinical applications

iii. Describe the interplay between G-proteins coupled receptors and tyrosine kinase receptors in signal transduction (20 marks)

iv. Write short assay on: (40 marks)

1. Laboratory tests for diagnosis of GH hypo-secretion (10 marks)
2. Biochemistry of thyroid gland (30 marks)

Good Luck