April-2001

[KD 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

Branch XIII — Biochemistry

(Revised Regulations)

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hour Maximum : 100 marks

Answer ALL questions.

1. What is diabetes mellitus? Classify it. How it is investigated? Explain how blood sugar level is regulated. (25)

2. What are porphyrias? Write symptoms common to them. Name the enzymes involved in various types of porphyrias and reactions catalyzed by them. How lead toxicity affects heme metabolism? What is the treatment for patients with porphyria? (25)

3. Write briefly on : (5 × 10 = 50)

(a) Analysis of extracellular body fluids and its importance.

(b) Thrombin and its regulation.

(c) Obesity.

(d) Clinical abnormality in iron metabolism.

(e) Polyamines and its plausible role in cancer.

November-2001

[KE 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Write in detail the biochemical changes seen in diabetic ketoacidosis. (25)

2. Write an essay on the role of kidneys in acid–base balance. (25)

3. Write short notes on : (5 × 10 = 50)

   (a) Anion gap.

   (b) Neuro hormones.

   (c) Prenatal diagnosis of genetic diseases.

   (d) Homocystine.

   (e) Growth factors.

March-2002

[KG 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. What are the various metabolic disorders of glucose metabolism? Discuss in detail the disorders resulting in hypoglycemia. (25)

2. What are porphyrias? How are they classified? Briefly describe the different porphyrias. (25)

3. Write briefly on : (5 × 10 = 50)

(a) Metabolic changes during starvation.

(b) Hyperlipoproteinemias.

(c) Diagnostic application of Troponins.

(d) Serum enzymes in the diagnosis of liver diseases.

(e) Clearance tests.

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[KH 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

ime : Three hours Maximum : 100 marks

Answer ALL questions.

1. Describe the tests performed to assess Liver function. What are the different types of Jaundice? (25)

2. What are Isoenzymes? Illustrate using Lactate dehydrogenase as an example. Describe the diagnostic importance of plasma enzymes with special reference to isoenzymes. (25)

3. Write briefly on : (5 × 10 = 50)

   (a) Lipid storage disorders

   (b) Amino acidurias

   (c) Glycosylated hemoglobin

   (d) Role of Kidney in acid–base balance

   (e) Hyperuricemia.

April-2003

[KI 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Describe various biochemical tests to diagnose thyroid disfunctions. (25)

2. Write in detail about Aminoacidurias and biochemical screening in clinical laboratory. (25)

3. Write short notes on : (5 x 10 = 50)

   (a) Clearance tests

   (b) Hyper uricemia

   (c) Alcohol intoxication

   (d) Phenyl ketonuria

   (e) Screening test for porphyrias.

[KJ 174] Sub. Code : 2073

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours
Theory : Two hours and forty minutes
M.C.Q. : Twenty minutes

Maximum : 100 marks
Theory : 80 marks
M.C.Q. : 20 marks

M.C.Q. must be answered **SEPARATELY** on the Answer Sheet provided as per the instructions given on the first page of M.C.Q. Booklet.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

1. Describe the role of kidney in the regulation of blood pH. (15)

2. Describe the tests performed to assess liver function and mention the different types of Jaundice. (15)

3. Write short notes : (10 × 5 = 50)

(a) 'G' proteins.

(b) Homeostasis of calcium.

(c) Lesch–Nyhan syndrome.

(d) Oratic aciduria.

(e) Leukotrines.

(f) Anion gap.

(g) Investigations in hypothyroidism.

(h) Hyperhomocystneimia.

(i) Biological value of proteins.

(j) Galactose tolerance test.

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[KO 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : (2 × 15 = 30)

(1) Discuss the renal function tests.

(2) Describe the disorders of aromatic amino acid metabolism.

II. Write short notes on : (10 × 5 = 50)

(a) Glucose tolerance test.

(b) Purine salvage pathway.

(c) Feed back regulation.

(d) Osmometry.

(e) Serum lipoprotein electrophoresis.

(f) Cardiac enzymes and their significance.

(g) Specific Dynamic Action (SDA).

(h) Hypokalemia.

(i) Erythropoietic porphyrias.

(j) Significance serum bilirubin estimation.

[KP 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Draw suitable diagrams wherever necessary.

Answer ALL questions.

I. Essay questions :

(1) Discuss in detail various Hemoglobinopathies. Discuss the techniques available to diagnose them. (20)

(2) Discuss the liver function tests and their clinical use. (15)

(3) Discuss in detail about laboratory assessment of functional status of Adrenal cortex. (15)

II. Write short notes on : (6 × 5 = 30)

(a) Detection of micro albumin in urine and its clinical significance

(b) Antiphospho lipid antibodies

(c) Biochemical changes in ALZHEIMER's disease

(d) VMA

(e) Auto analysers and clinical use

(f) Prostate specific antigen.

[KO 174] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : (2 × 15 = 30)

(1) Discuss the renal function tests.

(2) Describe the disorders of aromatic amino acid metabolism.

II. Write short notes on : (10 × 5 = 50)

(a) Glucose tolerance test.

(b) Purine salvage pathway.

(c) Feed back regulation.

(d) Osmometry.

(e) Serum lipoprotein electrophoresis.

(f) Cardiac enzymes and their significance.

(g) Specific Dynamic Action (SDA).

(h) Hypokalemia.

(i) Erythropoietic porphyrias.

(j) Significance serum bilirubin estimation.

[KQ 151] **Sub. Code : 2073**

M.D. DEGREE EXAMINATION.

Branch XIII — Biochemistry

CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Common to

Paper III — (Old/New/Revised Regulations)
(Candidates admitted from 1988-89 onwards)

and

Paper III — (For candidates admitted from 2004-2005 onwards)

Time : Three hours — Maximum : 100 marks

Theory : Two hours and forty minutes — Theory : 80 marks

M.C.Q. : Twenty minutes — M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary

I. Essay :

1. Discuss in detail about the principles, types and applications of "Elisa". (20)

2. Describe the various metabolic changes occuring in diabetes mellitus. (15)

3. Outline the steps of purines synthesis and add a note on Gout. (15)

II. Write short notes on : (6 × 5 = 30)

(a) Gastro intestinal hormones.

(b) Metabolism of Fructose.

(c) Hyper Homocysteinaemia.

(d) Screening tests for Inborn diseases.

(e) Methemoglobinaemia.

(f) Urinary creatinine protein ratio.

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[KR 162] **Sub. Code : 2058**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch XIII — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

1. Give the detailed classification and diagnostic evaluation of porphyrias. (20)

2. Discuss the causes and clinical diagnosis of hypokalaemia. (15)

3. Briefly mention thyroid function tests and their clinical applications. (15)

II. Write short notes on : (6 × 5 = 30)

(a) Biochemical changes in pregnancy

(b) Hyperurecemias

(c) Iron Toxicity

(d) Clearance tests

(e) Modified Siggard –Andersen Acid – base nomogram

(f) Load tests.

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MARCH 2008

[KS 150] **Sub. Code : 2045**

M.D. DEGREE EXAMINATION

(Revised Regulations)

Branch XIII — Biochemistry

(Common to all Regulations)

Paper III — CLINICAL BIOCHEMISTRY AND DIAGNOSTIC TECHNIQUES

Q.P. Code : 202045

Time : Three hours Maximum : 100 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : $(2 \times 20 = 40)$

1. Discuss the regulation of acid base balance in the body. Add a note on the disorders of acid base balance.

2. Give an account of the liver function tests and their interpretations.

II. Short notes : $(10 \times 6 = 60)$

1. Fluorosis
2. Hyperpituitarism.
3. Abnormal haemoglobins
4. Enzymes estimated in myocardial infarction
5. Biochemical analysis of cerebrospinal fluid
6. Glycogen storage diseases
7. Pancreatic function tests
8. Inborn errors of phenylalanine and tyrosine metabolism
9. Glycosylated haemoglobin
10. Hypercholesterolemia.
