

**APRIL 2001**

**[KD 230]**

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

Final

Branch III — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the investigations carried out in a case of Diabetic Keto Acidosis. What compensatory mechanisms occurs to correct the acidosis. (25)
  2. Discuss the mechanism of action of hormones that influence the calcium and phosphorus blood level. (25)
  3. Write briefly on : (5 × 10 = 50)
    - (a) Renal function tests.
    - (b) Hyper lipoproteinemias.
    - (c) Alimentary glycosuria.
    - (d) Immunological tests for thyroid function.
    - (e) Urine analysis , for Inborn Errors of Metabolism.
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**APRIL 2003**

**[KI 230]**

**Sub. Code : 2968**

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

Final

Branch III — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe the formation of various products formed from Phenylalanine in the body. What are the inborn errors seen in these pathways? (25)
  2. Describe the metabolism of plasma lipoproteins. Also write a note on lipoproteinemias. (25)
  3. Write briefly on : (5 × 10 = 50)
    - (a) Glucose Tolerance Test.
    - (b) Hyperbilirubinemias.
    - (c) Errors of Urea synthesis.
    - (d) Source, requirement, absorption and deficiency manifestations of Iodine.
    - (e) Investigation done to diagnose and classify renal tubular acidosis.
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APRIL 2004

[KK 230]

Sub. Code : 2968

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

Final

Branch III — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY

Time : Three hours                      Maximum : 100 marks

Sec. A & B : Two hours and              Sec. A & B : 80 marks  
forty minutes

Sec. C : Twenty minutes                      Sec. C : 20 marks

Answer Sections A and B in the SAME Answer book.

Answer Section C in the Answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. Write an essay on "Automation in Clinical Biochemistry". (15)
2. Discuss in details the structure and functions of immunoglobulins. (15)

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on the following :
  - (a) Hormonal regulation of blood glucose level.
  - (b) Importance of CSF biochemical analysis.
  - (c) Parathormone.
  - (d) Applications of antigen-antibody reactions.
  - (e) Lesch Nyhan syndrome.
  - (f) Buffer system in blood.
  - (g) Absorption of iron.
  - (h) Importance of serum amylase estimation.
  - (i) Spectrophotometry.
  - (j) Fetoplacental functions.

**AUGUST 2004**

**[KL 230]**

**Sub. Code : 2968**

**M.Sc. (Non-Clinical) DEGREE EXAMINATION.**

**(Final)**

**Branch III — Biochemistry**

**Paper III — CLINICAL BIOCHEMISTRY**

**Time : Three hours                      Maximum : 100 marks**

**Sec. A & B : Two hours and              Sec. A & B : 80 marks**  
**forty minutes**

**Section C : Twenty minutes              Section C : 20 marks**

**Answer Sections A and B in the SAME Answer Book.**

**Answer Section C in the answer sheet provided.**

**Answer ALL questions.**

**SECTION A**

**1. Write about the role of kidney in the maintenance of blood pH. (15)**

**2. What are Porphyrrias? Write about the classification of porphyrias. Add a note on acute intermittent porphyria. (15)**

**SECTION B**

**3. Write briefly on : (10 × 5 = 50)**

- (a) Alcohol intoxication.**
- (b) Diagnostic applications of troponins.**
- (c) Serum enzymes in liver disorders.**
- (d) Lactic acidosis.**
- (e) Abnormality in Iron metabolism.**
- (f) Renal tubular acidosis.**
- (g) Glycosylated haemoglobin.**
- (h) Hyperuricemia.**
- (i) Pentosuria.**
- (j) Vanillyl Mandelic Acid.**

**MARCH 2005**

**[KM 230]**

**Sub. Code : 2968**

**M.Sc. (Non-Clinical) DEGREE EXAMINATION.**

**Final**

**Branch III — Biochemistry**

**Paper III — CLINICAL BIOCHEMISTRY**

**Time : Three hours                      Maximum : 100 marks**

**Sec. A & B : Two hours and              Sec. A & B : 80 marks**  
**forty minutes**

**Section C : Twenty minutes              Section C : 20 marks**

**Answer Sections A and B in the SAME Answer Book.**

**Answer Section C in the answer sheet provided.**

**Answer ALL questions.**

**SECTION A — (2 × 15 = 30 marks)**

- 1. Name the different causes of coma. Discuss the investigations used to arrive at the diagnosis. (15)**
- 2. Describe the synthesis of thyroid hormones and tests to assess the thyroid function. (15)**

**SECTION B — (10 × 5 = 50 marks)**

- 3. Write briefly on :**
  - (a) Lesch-Nyhan syndrome**
  - (b) Fluorosis**

- (c) Metabolic acidosis**
- (d) Homeostasis of calcium**
- (e) Galactose tolerance test**
- (f) Sickle cell anaemia**
- (g) Neurohormones**
- (h) Clinical applications of Radio isotopes**
- (i) Screening tests for Porphyrrias**
- (j) Von Gierke's disease.**

**MARCH 2006**

**[KO 230]**

**Sub. Code : 2968**

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

**Final**

**Branch III — Biochemistry**

**Paper III — CLINICAL BIOCHEMISTRY**

Time : Three hours                      Maximum : 100 marks

Sec. A & B : Two hours and              Sec. A & B : 80 marks  
forty minutes

Sec. C : Twenty minutes                      Sec. C : 20 marks

Answer Sections A and B in the **SAME** answer book.

Answer Section C in the answer sheet provided.

Answer **ALL** questions.

**SECTION A — (2 × 15 = 30 marks)**

1. Discuss the importance of trace elements in nutrition. (15)

2. Write an essay on Inborn errors of protein metabolism. (15)

**SECTION B — (10 × 5 = 50 marks)**

3. Write short notes on the following :

- (a) Electrophoretic separation of Immunoglobulins
- (b) Alcaptonuria
- (c) Renal tubular acidosis.
- (d) Hyperuricemia
- (e) Parathormone
- (f) Calcitriol
- (g) Pancreatic function tests
- (h) Fatty liver
- (i) Serum Amylase
- (j) Glucose 6 Po<sub>4</sub> dehydrogenase deficiency.

September-2007

[KR 230]

Sub. Code : 2968

II. Short notes :

(6 × 5 = 30)

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

Final

Branch III — Biochemistry

Paper III — CLINICAL BIOCHEMISTRY

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 questions :

(1) Write about the types, characteristics and functions of lipoproteins. Add a note on the diagnosis of hyperprotenemia, hypoproteneemia and atherosclerosis.

(20)

(2) Explain in detail about the hormonal regulation of blood glucose and its monitoring. Explain the glycogen storage diseases.

(15)

(3) State the role of MHC in organ transplantation.

(15)

(a) Write about any two inborn errors of amino acid metabolism.

(b) Gout.

(c) Antigen – Antibody reaction.

(d) Metabolic disorders associated with calcium.

(e) Clinically important enzymes.

(f) Electrophoresis.