

AUGUST 2005

[KN 227]

Sub. Code : 2952

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

Preliminary

(Common to all branches)

Paper II — PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

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

Sec. A & B : 80 marks

Section C : Twenty minutes

Section C : 20 marks

**Answer Sections A and B in SEPARATE
Answer Books.**

Answer Section C in the Answer Sheet provided.

Answer ALL questions.

SECTION A — (40 marks)

(PHYSIOLOGY)

1. Discuss in detail the production, circulation and functions of cerebro spinal fluid. Explain the term blood brain barrier. (15)

2. Write short notes on : (5 × 5 = 25)

- (a) Iron deficiency anemia.**
- (b) Extra cellular fluid.**

(c) Cushing's syndrome.

(d) Functions of saliva.

(e) Reflex arc.

SECTION B — (40 marks)

(BIOCHEMISTRY)

3. Describe the structure and synthesis of cholesterol. Name the products formed from cholesterol and its importance. (15)

4. Write briefly on : (5 × 5 = 25)

(a) Coenzyme A.

(b) Structure of Insulin.

(c) Functions of Protein.

(d) Alkaptonuria.

(e) Importance of the assay of Serum Transaminases.

AUGUST 2006

[KP 227]

Sub. Code : 2952

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

Preliminary

(Common to all branches)

Paper II — PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Descriptive : Two hours and

Descriptive : 80 marks

forty minutes

Objective : Twenty minutes

Objective : 20 marks

Answer Sections A and B in the SEPARATE

Answer books.

Answer Section C in the Answer Sheet provided.

Answer ALL questions.

SECTION A — (40 marks)

PHYSIOLOGY

1. Define arterial Blood pressure. Mention the factors regulating BP. (15)
2. Give an account of formation of urine. (10)
3. Write short notes on : (3 × 5 = 15)
 - (a) ECG
 - (b) Vital capacity
 - (c) Functions of Gall Bladder.

SECTION B — (40 marks)

BIOCHEMISTRY

4. Justify the statement – 'Citric Acid Cycle is the final common metabolic pathway for carbohydrate, protein and lipids' add a note on its regulation. (15)
5. Describe the Metabolism of Phospholipids. (10)
6. Write short notes on : (3 × 5 = 15)
 - (a) Renal function test
 - (b) Bile Salts
 - (c) Structure of Hemoglobin.

MARCH 2007

[KQ 227]

Sub. Code : 2952

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

Preliminary

(Common to all branches)

Paper II — PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Descriptive : Two hours and Descriptive : 80 marks
forty minutes

Objective : Twenty minutes Objective : 20 marks

Answer Sections A and B in the **SEPARATE**
Answer Books.

Answer Section C in the Answer Sheet provided.

Answer ALL questions.

SECTION A — (40 marks)

(PHYSIOLOGY)

1. What is the normal blood calcium level and how it is regulated? (15)
2. Describe the origin, course, termination of the major descending motor pathway and its manifestations produced by lesion at various levels. (10)

3. Write short notes on : (3 × 5 = 15)

- (a) Law of intestine
- (b) Oral contraceptives
- (c) Attenuation reflex.

SECTION B — (40 marks)

(BIOCHEMISTRY)

4. Digestion and absorption of carbohydrates. Write in detail about gluconeogenesis. (15)

5. Write in detail about the salvage pathway of purines. (10)

6. Write short notes on : (3 × 5 = 15)

- (a) Plasma proteins
- (b) Fate of acetyl CoA
- (c) Catabolism of Haem.

MARCH 2008

[KS 227]

Sub. Code : 2952

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

Preliminary

(Common to all branches)

Paper II — PHYSIOLOGY AND BIOCHEMISTRY

Q.P. Code : 282952

Time : Three hours

Maximum : 100 marks

Answer Sections A and B in the **SEPARATE**
Answer books.

Answer ALL questions.

SECTION A — (60 marks)

PHYSIOLOGY

- I. Essay : (1 × 20 = 20)
1. Classify Leucocytes and describe their functions and their variations.
- II. Write short notes on : (10 × 4 = 40)
- (1) Blood Groups
 - (2) Artificial respiration
 - (3) Growth hormone
 - (4) Functions of Large intestine

- (5) E.C.G.
- (6) Anti-diuretic hormone
- (7) Cerebro spinal fluid
- (8) Plasma proteins
- (9) Cretinism
- (10) Functions of hypothalamus.

SECTION B — (40 marks)

BIOCHEMISTRY

- I. Essay : (1 × 20 = 20)
1. Write the structure of Aromatic Amino Acids. Write in detail about the metabolism of phenylalanine and about the Biologically important substances synthesised from it.
- II. Write short notes on : (5 × 4 = 20)
- (1) Mucopolysaccharides
 - (2) Prostaglandins
 - (3) Co-enzyme functions of Biotin
 - (4) Specific dynamic action
 - (5) Conversion of pyruvate to Acetyl CoA.