

007

APRIL - 1990

FIRST B.D.S. EXAMINATION, APRIL 1990

HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL the questions.

1. Describe erythropoiesis and the factors regulating it. (16 marks)
 2. Write short notes on the following :
 - (a) Functions of the liver.
 - (b) Transport of carbondioxide in the blood. (2×7=14 marks)
 3. Write short notes on the following :
 - (a) Mechanism of urine formation.
 - (b) Blood groups.
 - (c) Basal Metabolic Rate.
 - (d) Artificial respiration. (4×5=20 marks)
 4. Describe the actions of parathyroid hormone and its role in calcium homeostasis. (16 marks)
 5. Write short notes on :
 - (a) Cerebellar functions.
 - (b) Anterior pituitary hormone. (2×7=14 marks)
 6. Write short notes on any *four* of the following :
 - (a) Regulation of blood glucose level.
 - (b) Deglutition reflex.
 - (c) Scurvy.
 - (d) Electrocardiogram.
 - (e) Family planning methods. (4×5=20 marks)
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007

SEPTEMBER - 1990

FIRST B.D.S. DEGREE EXAMINATION, SEPTEMBER 1990.

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours.

Maximum : 100 marks.

Answer ALL the questions.

1. Define cardiac output. Describe in detail the factors maintaining it. How is it measured in man? (16 marks)
2. Write short notes on the following :
 - (a) Composition and regulation of gastric secretion. (7 marks)
 - (b) Plasma proteins. (7 marks)
3. Write short notes on the following :
 - (a) Hormones acting on the kidney. (5 marks)
 - (b) Haemophilia. (5 marks)
 - (c) Vital capacity. (5 marks)
 - (d) Reflex action. (5 marks)

4. Describe the hormonal regulation of blood glucose level. (16 marks)
5. Write short notes on the following :
 - (a) Pain pathway. (7 marks)
 - (b) Thyroid hormones. (7 marks)
6. Write short notes on the following : (4 × 5 = 20 marks)
 - (a) Rickets.
 - (b) Cyanosis.
 - (c) Arterial blood pressure.
 - (d) Visual pathway.

FIRST B. D. S. DEGREE EXAMINATION, APRIL 1991.

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time: Three hours. Maximum: 100 marks.

Answer Sections A and B in separate answer-books.

Answer ALL the questions.

SECTION A — (50 marks)

1. Describe the factors regulating the normal heart rate. (16 marks)
2. Write short notes on the following :
 - (a) Differences between upper motor neuron lesion and lower motor neuron lesion.
 - (b) Role of essential amino acids in the body. (2×7=14 marks)
3. Write short notes on the following :
 - (a) Haemophilia and purpura.
 - (b) Types of movements in the small intestine
 - (c) Effects of Vitamin D deficiency.
 - (d) Functions of middle ear. (4×5=20 marks)

SECTION B (50 marks)

4. Give an account of the regulation of calcium metabolism. (16 marks)
5. Write short notes on :
 - (a) Acidification of urine and its significance.
 - (b) Vital capacity and its significance. (2×7=14 marks)
6. Write short notes on any four of the following :
 - (a) Absorption of fat.
 - (b) Cyanosis.
 - (c) B. Lymphocyte.
 - (d) GFR and how it is measured.
 - (e) Lymph. (4×5=20 marks)

020A

APRIL - 1991

FIRST B.D.S. EXAMINATION, APRIL 1991.

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Two and a half hours. Maximum : 60 marks.

Sections A and B should be answered in separate answer books.

Draw diagrams wherever needed for answers in Sections A and B.

SECTION A

1. Describe the hormonal control of blood calcium level. (15 marks)
2. Describe the innervation of the urinary bladder and how micturition is controlled. (15 marks)

SECTION B

3. Write short notes on :
 - (a) Thrombocytopenic purpura.
 - (b) Jaundice.
 - (c) Cretin.
 - (d) Gluconeogenesis.
 - (e) Vitamin A.
 - (f) Functions of CSF. (6 × 5 = 30 marks)
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020A

OCTOBER - 1991

FIRST B.D.S. DEGREE EXAMINATION, OCTOBER 1991.

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Two and a half hours. Maximum : 60 marks.

Answer ALL questions.

Answer Sections A and B in separate answer books.

SECTION A — (30 marks)

1. Define cardiac cycle. Describe the various events that occur during a cardiac cycle. (15 marks)
2. Describe the structure of adrenal cortex. Name the important hormones produced. Describe the actions of any one of them. (15 marks)

SECTION B — (30 marks)

3. Write short notes on :
 - (a) Mechanism of clotting.
 - (b) Amylase.
 - (c) Neural pathways for taste.
 - (d) Fat soluble vitamins.
 - (e) Family Planning methods.
 - (f) Mechanism of respiration. (6 × 5 = 30 marks)
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RS 502]

APRIL - 1993

FIRST B.D.S. DEGREE EXAMINATION.

(Old Regulations)

Paper II – HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe the composition, functions and mechanism of regulation of secretion of gastric juice. (16)
2. Write briefly on the following : (2 × 7 = 14)
 - (a) Spermatogenesis.
 - (b) Functions of platelets.
3. Write short notes on : (4 × 5 = 20)
 - (a) Respiratory dead space.
 - (b) Sino-atrial node.
 - (c) Luteinizing hormone.
 - (d) Sensory Receptors.
4. What is Glomerular Filtration Rate? What are the factors affecting G.F.R? Describe a method of measurement of G.F.R. (16)
5. Write briefly on the following : (2 × 7 = 14)
 - (a) Isoenzymes.
 - (b) Nitrogen balance.

6. Write short notes on :

(4 × 5 = 20)

- (a) Active transport.
 - (b) Hypoparathyroidism.
 - (c) Middle ear.
 - (d) Normal Electrocardiogram.
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[SB 525]

APRIL - 1995
First B.D.S. Degree Examination

(Old Regulations)

**Paper II - HUMAN PHYSIOLOGY AND
BIOCHEMISTRY**

Time : Three hours

Maximum : 100 Marks

Answer All Questions

1. Name three blood group systems. Give the basis of blood grouping. Describe the possible complications after blood transfusions. (16)
2. Write short notes on :
 - a) Actions of Parathormone
 - b) Pharyngeal phase of deglutition(2X7 = 14)
3. Compare
 - a) Rods and cones
 - b) Myelinated and Unmyelinated nerve fibres
 - c) First and second heart sounds
 - d) Osmotic diuresis and water diuresis(4 X 5 = 20)

4. Give the normal blood sugar level. Describe the hormonal regulation of blood sugar and give three features of Diabetes Mellitus (16)
5. Write short notes on :
 - a) Referred pain
 - b) Immunological test for pregnancy(2X7 = 14)
6. Write short notes on :
 - a) Essential fatty acids
 - b) Role of fluoride
 - c) Cyanosis
 - d) Functions of Stomach
 - e) Functions of inner ear.(5X4 = 20)

[SB 528]

APRIL - 1995

SECTION—B

First B.D.S. Degree Examination

(New Regulations)

**Paper II - HUMAN PHYSIOLOGY AND
BIOCHEMISTRY**

Time : Three hours Maximum : 90 marks
Two and a half hours Sec. A & B : 60 marks
for section A and B

Answer Section A and B in separate answer Books.
Answer Section C in the answer sheet provided.

SECTION A

1. Describe a method for determining blood volume in man. Name the conditions in which it is decreased. Briefly describe how it is regulated (15)
2. Describe the structure and functions of semicircular canals (15)

3. Write short notes on the following ;

- a) Functions of liver
- b) Plasma proteins
- c) Vital capacity
- d) Baroreceptors
- e) Parathyroid hormone
- f) ECG

(6 X 5 = 30)

(SB 531) APRIL - 1995

First B.D.S. Degree Examination

(Revised Regulations)

Paper II - HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Section C : 20 minutes Section A and B : 70 marks

Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided

SECTION - A

(HUMAN PHYSIOLOGY)

1. Describe in detail the role of the arterial baroreceptors in the regulation of blood pressure
(15)

2. Write short notes on :

- a) Functions of gonadotrophins
- b) Hemophilia
- c) Emptying time of stomach
- d) Referred pain

(4×5 = 20)

SECTION—B

(BIOCHEMISTRY)

1. Mention the sources, daily requirements of vitamin B₁₂. Describe its absorption, biochemical functions and deficiency manifestations. What is folate trap? (15)

2. Write short notes on :

- a) Lipoproteins
- b) Glucose tolerance test
- c) Aminotransferases and their clinical significance
- d) Factors influencing Enzyme activity

(4 X 5 = 20)

[AK 608] APRIL - 1996 Subject Code : 4062

First B. D. S. Degree Examination

(Revised Regulations)

**Paper II - HUMAN PHYSIOLOGY
AND BIOCHEMISTRY**

Time : Three hours. Max. : 100 marks.
Two and a half hours
for Section A and B Sec. A and B. ; 70 marks.

Answer Sections A and B in separate answer books.
Answer Section C in the answer sheet provided.

SECTION—A

(HUMAN PHYSIOLOGY)

1. Describe in detail, the mechanism of blood coagulation. (15)
2. Give an account of the hormonal regulation of blood calcium level. (15)
3. Write short notes on :
 - a) Functions of saliva
 - b) Heart sounds
 - c) Chemical regulation of respiration
 - d) Rods and cones (4X5 = 20)

SECTION- B

(4×5 = 20)

(BIO CHEMISTRY)

4. Write short notes on :
 - a) Classification of carbohydrates
 - b) Competitive inhibition
 - c) Post-hepatic jaundice
 - d) Pyridoxine

[PK 608] OCTOBER - 1996 Subject Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B

Answer Section A and B in separate answer books.

Answer Section C in the answer sheet provided

SECTION A

(HUMAN PHYSIOLOGY)

1. Define blood pressure. How is it determined? Describe in detail the regulation of blood pressure. (15)
2. Name the stages of Erythropoiesis. Describe in detail the factors necessary for erythropoiesis. Add a note on Megaloblastic anaemia. (15)
3. Write short notes on :
 - (a) Deglutition.
 - (b) Vital capacity.
 - (c) Conditioned reflexes.
 - (d) Referred pain. (4 x 5 = 20)

[PK 608]

SECTION B

(BIOCHEMISTRY)

4. Write short notes on :
 - (a) Dietary sources, requirement and functions of Vitamin 'A'
 - (b) Classification of Lipids.
 - (c) Enzymes of clinical significance (any Two)
 - (d) Dietary sources, functions, requirements and deficiency symptoms of calcium. (4 x 5 = 20)

OCTOBER - 1997

[MS 608]

Sub. Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(New/Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Two and a half hours

Section A & B : 70 marks

for Section A and B

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A

1. Describe in detail how oxygen is transported in the body. Add a note on oxygen-disassociation curve. (15)
2. Describe the mechanism of coagulation of blood in detail. (15)
3. Write short notes on : (4 × 5 = 20)
 - (a) Acromegaly.
 - (b) Refractive errors of the eye.
 - (c) Motor areas of cerebral cortex.
 - (d) Heart sounds.

SECTION B

4. Write short notes on : (4 × 5 = 20)
 - (a) Isoenzymes.
 - (b) Biochemical functions and requirements of Ascorbic acid.
 - (c) Role of fluoride in dental health.
 - (d) Glucose tolerance test.
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V 608] APRIL - 1998 Sub. Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(Old/Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Section A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (50 marks)

1. Classify and describe the structure and function of leucocytes in detail. Add a note on immunity. (15)

2. What is the normal Blood Calcium level? How is it maintained? (15)

B. Write short notes on : (4 × 5 = 20)

(a) S.A. Node.

(b) Hypoxia.

(c) Rods and cones.

(d) Stunted growth in hypothyroidism.

SECTION B — (4 × 5 = 20 marks)

4. Write short notes on :

(a) Ketone Bodies.

(b) Essential Amino acids.

(c) Biological roles of Vitamin D.

(d) Bile salts and bile pigments.

[SV 652] APRIL - 1998 Sub. Code : 4064

FIRST B.D.S. DEGREE EXAMINATION.

(Modified Regulations)

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A

1. Mention the ascending fibers of the spinal cord. Discuss in detail, the pathway for pain, theories of pain, neurotransmitters involved. (15)

2. Write short notes on : (4 × 5 = 20)

- (a) Functions and composition of saliva.
- (b) Waves of a normal Electro Cardio Gram.
- (c) Action of Antidiuretic Hormone.
- (d) Transportation of O₂

SECTION B

3. What are Non-Protein Nitrogenous substances? Describe the formation and fate of any one of them. (15)

4. Write short notes on :

- (a) Abnormal constituents of urine.
- (b) Essential fatty acids.
- (c) Deficiency manifestation of Niacin.

[SM 608] OCTOBER - 1998 Sub. Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(Old/Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Section A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (50 marks)

1. Define arterial blood pressure, giving normal values. Describe the role of arterial baroreceptors and the kidney in the regulation of blood pressure. (15)
2. Describe the process of Deglutition. (15)
3. Write short notes on : (4 × 5 = 20)
 - (a) Referred pain
 - (b) Artificial respiration
 - (c) Taste pathways
 - (d) Anticoagulants.

SECTION B — (4 × 5 = 20 marks)

4. Write short notes on :
 - (a) Essential fatty acids
 - (b) Denaturation of proteins
 - (c) Biochemical role of thiamine
 - (d) Digestion and absorption of iron.
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APRIL - 1999

[SG 653]

Sub. Code : 4132

FIRST B.D.S. DEGREE EXAMINATION.

(Modified Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours Maximum : 100 marks
Two and a half hours Sec. A & Sec. B : 70 marks
for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A

PHYSIOLOGY

1. Define arterial blood pressure. What are the physiological variations and factors determining the blood pressure? How is it regulated? Add a note on Hypertension. (1 + 5 + 6 + 3 = 15)
2. Write short notes on : (4 × 5 = 20)
 - (a) Erythroblastosis
 - (b) Timed Vital Capacity (FEV₁) and its clinical significance
 - (c) Functions of Thalamus and a note on Thalamic syndrome
 - (d) Pregnancy tests.

SECTION B

BIOCHEMISTRY

3. Write the dietary sources, daily requirements, biochemical functions and deficiency symptoms of Calcium and Phosphorus. (15)
4. Write short notes on : (4 × 5 = 20)
 - (a) Ketone bodies
 - (b) Citric acid cycle
 - (c) Vitamin K
 - (d) Coenzymes.

OCTOBER - 1999

[KA 608]

Sub. Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Two and half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A

(Physiology)

1. What is the normal duration of the cardiac cycle? Describe all the events of the cardiac cycle with the help of a suitable diagram. (15)
2. Describe the process of haemostasis in detail. (15)
3. Write short notes on : (4 × 5 = 20)
 - (a) Mechanics of respiration
 - (b) Growth hormone
 - (c) Aldosterone
 - (d) Functions of saliva.

SECTION B — (4 × 5 = 20 marks)

(Biochemistry)

4. Write short notes on :
 - (a) Electrophoresis
 - (b) Essential fatty acids
 - (c) Phenyl ketonuria
 - (d) Glucose tolerance test.

OCTOBER - 1999

[KA 653]

Sub. Code : 4132

FIRST B.D.S. DEGREE EXAMINATION

(Modified Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Two and a half hours
for Sec. A & Sec. B.

Sections A & B : 70 marks
Section C : 30 marks

Answer Sections A & B in separate Answer books.

Answer Section C in the answer sheet provided.

SECTION A

1. Name the Hormones secreted by the adrenal gland. Describe the biosynthesis, action and regulation of secretion of gluco corticoids. Add a note on cushings syndrome. (15)

2. Short notes on : (4 × 5 = 20)

- (a) Venous Return
- (b) Functions of Hypothalamus
- (c) Tetany
- (d) Glomerular Filtration rate.

SECTION B

(BIOCHEMISTRY)

3. Define Enzyme. Write the classification and factors influencing enzyme action. Mention three enzymes of clinical importance. (15)

4. Write short note's on : (4 × 5 = 20)

- (a) Starch hydrolysis
- (b) Structure and importance of cholesterol
- (c) Bile salts
- (d) Fluorosis.

APRIL - 2000

[KB 608]

Sub. Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Two and a half hours
for Sections A & B

Sections A & B : 70 marks
Section C : 30 marks

Answer Sections A & B in separate Answer Books.

Answer Section C in Answer sheet provided.

SECTION A — (50 marks)

HUMAN PHYSIOLOGY

1. Name the plasma proteins and describe their functions in the body. (15)
2. Define cardiac output and cardiac index giving normal values. Describe the regulation of cardiac output. (15)
3. Write short notes on: (4 × 5 = 20)
 - (a) Juxtaglomerular apparatus.
 - (b) Functions of thalamus.
 - (c) Cretinism.
 - (d) Gonadotrophic hormones.

SECTION B — (4 × 5 = 20 marks)

BIOCHEMISTRY

4. Write short notes on :
 - (a) Isoenzymes.
 - (b) Fluorosis.
 - (c) Vitamin - K.
 - (d) Phospholipids.

APRIL - 2000

[KB 653]

Sub. Code : 4132

FIRST B.D.S. DEGREE EXAMINATION.

(Modified Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate Answer books.

Answer Section C in the answer sheet provided.

SECTION A

(HUMAN PHYSIOLOGY)

1. Draw a schematic diagram of the steps involved in the intrinsic pathway of coagulation of blood. Explain how clotting is prevented in the body. Mention the mechanism of action of any two anticoagulants. (15)

2. Short notes on : (4 × 5 = 20)

- (a) Reflex salivation
- (b) Cretinism
- (c) Hypoxia
- (d) Dialysis

SECTION B

(BIOCHEMISTRY)

3. Classify proteins. Give examples for each class. Add a note on immunoglobulins. (15)

4. Write short notes on : (4 × 5 = 20)

- (a) Starch
- (b) B.M.R.
- (c) Biochemical functions of Phosphorus
- (d) Jaundice.

OCTOBER - 2000

[KC 608]

Sub. Code : 4062

FIRST B.D.S. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours
Two and a half hours
for Sections A & B

Maximum : 100 marks
Sections A & B : 70 marks
Section C : 30 marks

Answer Sections A and B in separate Answer Books.

Answer Section C in the Answer Sheet provided.

SECTION A — (50 marks)

(HUMAN PHYSIOLOGY)

1. Classify White Blood Cells. Enumerate their developmental stages and describe the factors controlling Leucopoiesis. (15)
2. Describe the role of Baroreceptors in the regulation of blood pressure. (15)

3. Write short notes on : (4 × 5 = 20)

- (a) Referred pain
- (b) Hypercalcemic actions of parathormone
- (c) Functions of the skin
- (d) Pharyngeal phase of deglutition.

SECTION B — (4 × 5 = 20 marks)

(BIOCHEMISTRY)

4. Write short notes on .

- (a) Deficiency and toxicity symptoms of fluorides.
- (b) Essential Amino Acids.
- (c) Biomedical importance of cholesterol.
- (d) Vitamin E.

OCTOBER - 2000

[KC 653]

Sub. Code : 4132

FIRST B.D.S. DEGREE EXAMINATION,

(Modified Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours Maximum : 100 marks
Two and a half hours Sec. A & Sec. B : 70 marks
for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in separate Answer Books.

Answer Section C in the Answer Sheet provided.

SECTION A

(HUMAN PHYSIOLOGY)

1. List the functions of calcium in the body. Describe the hormonal regulation of the blood calcium level. (15)
2. Write short notes on : (4 × 5 = 20)
 - (a) Visual pathway
 - (b) Platelets
 - (c) Micturition
 - (d) Functions of cerebellum.

SECTION B

(BIOCHEMISTRY)

3. Describe the structure, functions, deficiency symptoms, sources and daily requirements of Vitamin E. Add a note on hypervitaminosis of Vitamin E. (15)
4. Write short notes on : (4 × 5 = 20)
 - (a) Iron containing proteins
 - (b) Mucopolysaccharides
 - (c) Balanced diet
 - (d) Electron transport chain.