

M.D. DEGREE EXAMINATION, MARCH 1990

Branch V — Physiology

GENERAL PHYSIOLOGY, BLOOD, DIGESTION AND
TISSUES OF THE BODY

Time : Three hours

Answer ALL the questions.

1. Discuss the hormonal regulation of electrolyte balance in the body.
 2. Describe the physiological basis of spasticity and rigidity.
 3. Write briefly on :
 - (a) Thermal changes during muscular contraction.
 - (b) Mechanism of action of steroid hormones.
 - (c) Neural regulation of gastric secretion.
 - (d) Clinical evaluation of bleeding disorders.
 - (e) Role of vitamins in erythropoiesis.
 - (f) Intercellular junctions.
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March-1991

263

M.D. DEGREE EXAMINATION, MARCH 1991.

Branch V — Physiology

**Paper I — GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUES OF THE BODY**

Time : Three hours.

Answer ALL the questions.

- 1. Discuss the origin of transmembrane potential in an excitable tissue and explain the sequence of events on stimulation.**
 - 2. Discuss the regulation of total body water in health and disease.**
 - 3. Write briefly on :**
 - (a) Role of calcium in skeletal muscle.**
 - (b) Patch clamp technique.**
 - (c) Acetylcholine receptors.**
 - (d) Cell mediated Immunity.**
 - (e) Dietary fibers.**
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september-1992

[263]

M.D. DEGREE EXAMINATION, SEPTEMBER 1992.

Branch V— Physiology

Paper I — GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUE OF THE BODY

Time : Three hours. Maximum : 100 marks.

Answer ALL the questions.

1. Discuss the role of lymphocytes in an immune response.
 2. Discuss the gastric function tests.
 3. Write briefly on :
 - (a) Endoplasmic reticulum in skeletal muscle.
 - (b) Active transport.
 - (c) Platelet activation.
 - (d) Fibrin degradation products.
 - (e) Methods of study of esophageal motility.
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March-1993

[1163]

M.D. DEGREE EXAMINATION, MARCH 1993.

Branch V — Physiology

Paper I — GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUES OF THE BODY

Time : Three hours.

Answer ALL questions.

1. Discuss the Biophysics of skeletal muscle contraction.
 2. Describe in detail the mechanisms of Hemostasis.
 3. Write briefly on :
 - (a) Cyclic AMP.
 - (b) Intestinal Iron absorption.
 - (c) Condition reflex.
 - (d) Circadian rhythm.
 - (e) Auto-immune disease.
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November-1993

[PR 363]

M.D. DEGREE EXAMINATION

Branch V — Physiology

(Old/New Regulations)

Paper I — GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUES OF BODY

Time : Three hours.

Maximum : 100 marks.

Answer ALL questions.

1. Discuss the role of various factors and nutrients in erythropoiesis. Describe the consequences of deficiency of any one of the nutrients on erythropoiesis. (25)
2. What methods are used for assessing small intestinal motor function? What are migrating and Myoelectric Motor Complexes (MMCS)? Discuss the special features of innervation of small intestine with reference to control of movements. (25)
3. Write short notes on :
 - (a) Biological effects of calmodulin.
 - (b) Carrier mediated transport.
 - (c) Haemostasis.
 - (d) Cell mediated immune response.
 - (e) Absorption of fat. (5 × 10 = 50)

April-1994

[VM 1063]

M.D. DEGREE EXAMINATION.

Branch V — Physiology

(Old/New Regulations)

Paper I — GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUES OF BODY

Time : Three hours.

Maximum : 100 marks.

Answer ALL questions.

1. Discuss the role of negative and positive feedback mechanisms in the body. (25)
 2. Give an account of the mechanical and biochemical events taking place in the Stomach, when it is empty and when it is filled. (25)
 3. Write briefly on :
 - (a) Intercellular communication.
 - (b) G. Protein.
 - (c) Platelet-activating factor.
 - (d) Hypoproteinemia.
 - (e) Intracellular Calcium. (5 × 10 = 50)
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April-1995

[FB 163]

M.D. DEGREE EXAMINATION.

Branch V – Physiology

(Old/New Regulations)

**Paper I – GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUES OF BODY**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Give a general description of the blood coagulation reactions with the help of a diagram. Discuss in detail the initiation of blood coagulation and formation and stabilization of fibrin. (25)
 2. What is the composition of gastric secretion? Describe the cellular mechanisms of gastric secretion. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Active transport.
 - (b) Lysosomes.
 - (c) Synthesis of antibodies.
 - (d) Cholecystokinin.
 - (e) Absorption of carbohydrates.
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October-1996

PK 122

M.D. DEGREE EXAMINATION

Branch V - Physiology

(Old/New Regulations)

Paper I - GENERAL PHYSIOLOGY, BLOOD,
DIGESTION AND TISSUES OF BODY

Time: Three hours

Max. marks:100

Answer All Questions

1. How do ions pass through the cell membrane?
Explain what is meant by gating of protein transport channels. Also explain voltage gating and ligand gating. Add a note on patch clamp techniques for studying ionic channels. (25)
2. What is immunity? How many types are there? Describe the role of T-Lymphocytes, B-Lymphocytes and NK-lymphocytes in immunity. Add a clinical note on autoimmune diseases. (25)
3. Write briefly on:
 - (a) Structure and functions of platelets
 - (b) Bombay Blood group
 - (c) Regulation of food intake
 - (d) Characteristics of small intestinal secretions and their regulation
 - (e) Muscle proteins.

(5x10=50)

April-1997

MP 123

M.D. DEGREE EXAMINATION

Branch V - Physiology

(New/Revised Regulations)

Paper I - GENERAL PHYSIOLOGY, BLOOD, DIGESTION
AND TISSUES OF THE BODY

Time: Three hours

Max. marks: 100

Answer All Questions

1. Describe the three types of lymphocytes and their subtypes. Discuss the role of lymphocytes in immunity. (25)
2. In a tabular form, give the site of production and actions of gastrointestinal hormones. Discuss the methods of assessment of gastric functions. (25)
3. Write briefly on:
 - (a) Wallerian degeneration
 - (b) Intercellular communication
 - (c) Donnan effect
 - (d) Myasthenia gravis
 - (e) Motor unit.

(5x10=50)

October-1997

MS 121

M.D. DEGREE EXAMINATION

Branch V - Physiology

(Revised Regulations)

Paper I - GENERAL PHYSIOLOGY, BLOOD,
DIGESTION AND TISSUES OF THE BODY

Time: Three hours

Max.marks:100

Answer All Questions

1. What is Rh factor? What is its importance in blood transfusion?
2. Discuss the functions of the dietary fibres in our diet?
3. Write briefly on:
 - (a) Theories of ageing
 - (b) Contractile proteins in smooth muscle
 - (c) Functions of ependyma
 - (d) Microtubules in nerve fibres
 - (e) Pacemaker potential in cardiac tissue.

(5x10=50)

April-1998

SV 123

M.D. DEGREE EXAMINATION

Branch V * Physiology

(New/Revised Regulations).

Paper I - GENERAL PHYSIOLOGY, BLOOD,
DIGESTION AND TISSUES OF THE BODY

Time: Three hours

Max.marks:100

Answer All Questions

1. Explain the different mechanisms of active transport across cell membranes. How is the knowledge about these mechanisms applied in the management of disease conditions? (25)
2. What is the mechanism of gastric emptying? How is it regulated? (25)
3. Write briefly on:
 - (a) Physiological basis of gall stone formation
 - (b) The role of platelets in health and disease
 - (c) Differences between ABO and Rh blood group systems
 - (d) Immune functions that are impaired in T-cell defects
 - (e) Growth factors.

(5x10=50)

April-1999

[SG 123]

Sub. Code : 2021

M.D. DEGREE EXAMINATION.

Branch V — Physiology

(New/Revised Regulations)

Paper I — GENERAL PHYSIOLOGY, BLOOD,
DIGESTION AND TISSUES OF THE BODY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss with appropriate clinical correlations, the mechanisms that maintain the fluidity of blood in the circulatory system. (25)
 2. How is the sodium concentration of body fluids maintained at its normal level in spite of wide variations in the intake of salt and water? (25)
 3. Write briefly on :
 - (a) Physiological basis of
 - (i) development of peptic ulcers
 - (ii) their management.
 - (b) Propulsive movements of the gastrointestinal tract and their abnormalities
 - (c) T lymphocytes
 - (d) Calcium transport across membranes
 - (e) Messenger RNA. (5 × 10 = 50)
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October-1999

[KA 123]

Sub. Code : 2021

M.D. DEGREE EXAMINATION.

(New/Revised Regulations)

Branch V — Physiology

Paper I — GENERAL PHYSIOLOGY, BLOOD,
DIGESTION AND TISSUES OF THE BODY

Time : Three hours .

Maximum : 100 marks

Answer ALL questions.

1. Describe the role of various "Feedback" mechanisms in maintenance of milieu interior of human body. (25)
 2. Give an account of the composition, formation and functions of Bile. (25)
 3. Write Briefly on : (5 × 10 = 50)
 - (a) Plasma proteins
 - (b) Secretin
 - (c) Facilitated Diffusion
 - (d) Functions of exocrine Pancreatic juice
 - (e) Functions and fate of RBC.
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April-2000

[KB 123]

Sub. Code : 2020

M.D. DEGREE EXAMINATION.

(New/Revised Regulations)

Branch V — Physiology

Paper I — GENERAL PHYSIOLOGY, BLOOD,
DIGESTION AND TISSUES OF THE BODY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Draw diagrams wherever necessary.

1. * Discuss the recent advances in the knowledge on the mechanism of Intravascular and Extravascular clotting of blood. (25)
 2. Discuss the regulation of Hydrogen ion concentration in Body fluids. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Immunoglobulins
 - (b) Homeostasis
 - (c) B and T - Lymphocytes
 - (d) Aging
 - (e) Movements of Small Intestine and their functions.
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M.D. DEGREE EXAMINATION.

(New/Revised Regulations)

Branch V — Physiology

Paper I — GENERAL PHYSIOLOGY, BLOOD
DIGESTION AND TISSUES OF THE BODY

Time : Three hours :

Maximum : 100 marks

Answer ALL questions.

1. Describe how the body normally handles products of hemolysis. Explain the consequences of excessive intravascular hemolysis. (25)
 2. Discuss the role of calcium ions in skeletal muscle excitation and contraction. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Simple and facilitated diffusion.
 - (b) Role of gastrointestinal hormones.
 - (c) Prevention and treatment of Erythroblastosis foetalis.
 - (d) Cholecystography.
 - (e) Tests of hemostatic function.
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