

[KM 123]

Sub. Code : 2020

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch V — Physiology

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

Time : Three hours                      Maximum : 100 marks

Theory : Two hours and                      Theory : 80 marks  
forty minutes

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

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :                                              (2 × 15 = 30)

(1) Describe the various stages of Haemopoiesis. Explain in detail the various factors influencing the process.

(2) Describe the ionic fluxes across the cell membrane during rest and activity.

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

(a) Describe the molecular basis of muscular contraction.

(b) Immunoglobulins and their functions

(c) Describe the deglutition reflex.

(d) Latest theory of blood coagulation.

(e) Role of bile in digestion and absorption of fats.

(f) Physiological basis of diarrhoea.

(g) What is haemophilia? Mention the unique features.

(h) Reflex mechanism of salivary secretion.

(i) Describe the role of gut peptides in the secretory function of the Gut.

(j) Strength-Duration curve.

[KP 123]

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II. Write short notes on :

(6 × 5 = 30)

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Theory : Two hours and                      Theory : 80 marks  
forty minutes

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

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

(1) Explain the composition and functions of bile, add a note on gall stones.                      (20)

(2) Discuss the physiology of aging.                      (15)

(3) Discuss the role of negative and positive feedback mechanisms in the body.                      (15)

- (a) Positive feedback systems.
- (b) Mechanism of HCl secretion from stomach.
- (c) Single unit smooth muscle.
- (d) Ionic events responsible for Resting Membrane Potential.
- (e) Enteric Nervous System.
- (f) Physiological Jaundice.

[KQ 120]

Sub. Code : 2020

M.D. DEGREE EXAMINATION.

Branch V — Physiology

GENERAL PHYSIOLOGY, BLOOD, DIGESTION AND  
TISSUES OF THE BODY

Common to

Paper I — (Old/New/Revised Regulations) (Candidates  
admitted from 1988–89 onwards)

and

Paper I — (For candidates admitted from 2004–2005  
onwards)

Time : Three hours                      Maximum : 100 marks

Theory : Two hours and                      Theory : 80 marks  
forty minutes

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

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

(1) Discuss the role of platelets in hemostasis.  
Add a note on platelet function tests.                      (20)

(2) With experimental evidences, describe the  
regulatory mechanisms that govern different phases of  
gastric secretion.                      (15)

(3) Discuss various mechanisms of active  
transport across the cell membrane.                      (15)

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

(a) Resting membrane potential

(b) Enterohepatic circulation

(c) Immunoglobulins and their functions

(d) Basal electrical rhythm of gastrointestinal  
smooth muscles

(e) Gap junctions

(f) Reticulocyte response.

**MARCH 2008**

**[KS 121]**

**Sub. Code : 2018**

M.D. DEGREE EXAMINATION.

Branch V – Physiology

GENERAL PHYSIOLOGY, BLOOD, DIGESTION AND TISSUES OF  
THE BODY

(Common to all candidates)

**Q.P. Code: 202018**

Time : Three hours

Maximum : 100 marks

Draw diagrams wherever necessary.

Answer ALL questions.

- I. Essay questions : (2 × 20 = 40)
1. Discuss aging from the point of view of its cellular and molecular mechanisms that underlie it. (20)
  2. Define basic electric rhythm (BER) and migratory motor complex (MMR) and describe the functions of each in the regulation of gastrointestinal motility. (20)
- II. Write short notes on : (10 × 6 = 60)
1. Role of Lymphocytes in Immunity.
  2. Theories of Aging.
  3. Mechanism of HCl secretion and the drugs which inhibit HCl secretion.
  4. Role of platelets in haemostasis.
  5. Receptor mediated endocytosis.
  6. Length-Tension relation in a striated muscle contraction.
  7. Digestion and Absorption of carbohydrates.
  8. Bilirubin metabolism in foetus and adults.
  9. Classify anaemias.
  10. Anticoagulant system in Vivo.
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September 2008

[KT 121]

Sub. Code: 2018

**M.D. DEGREE EXAMINATION**

**Branch V – Physiology**

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

(Common to all candidates)

*Q.P. Code : 202018*

**Time : Three hours**

**Maximum : 100 marks**

**Draw suitable diagram wherever necessary.**

**Answer ALL questions.**

**I. Essay questions :**

**(2 X 20 = 40)**

1. What are feed back controls? Illustrate with three examples each from the endocrine and nervous systems.
2. Discuss the defense mechanisms of the body.

**II. Write short notes on :**

**(10 X 6 = 60)**

1. Give an account of Gastro-intestinal hormones.
  2. ABO Blood groups.
  3. Basic Electric Rhythm.
  4. Haemoglobin.
  5. Excitation –contraction coupling.
  6. Theories of aging.
  7. Evolved potential.
  8. Na<sup>+</sup> - K<sup>+</sup> ATPase.
  9. Deglutition.
  10. Discuss the length – tension curve of skeletal muscle.
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