

April-2001

[KD 123]

Sub. Code : 2020

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.

Draw diagrams wherever necessary.

1. Give an account of the regulation and mechanism of gastric secretion with experimental evidences. (25)
2. Classify blood groups. What is Rh factor? What is its importance in blood transfusion and add a note on Erythroblastosis Foetalis? (25)
3. Write briefly on : (5 × 10 = 50)
  - (a) Exocytosis and Endocytosis.
  - (b) Immunity.
  - (c) Patch clamping.
  - (d) Secretin and Pancreo-zymin.
  - (e) Development and management of peptic ulcers.

November-2001

[KE 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 mechanisms of exchange of fluids between blood and interstitial fluid and the capillaries. (25)
  2. Discuss the motility of the stomach, the methods of studying them and the mechanism of gastric emptying. (25)
  3. Write briefly on : (5 × 10 = 50)
    - (a) Basis of resting membrane potential and action potential.
    - (b) H-antigen.
    - (c) Thiocyanate space.
    - (d) Cellular immunity.
    - (e) Intercellular connections.
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September-2002

[KH 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

Answer ALL questions.

Draw diagrams wherever necessary

1. Discuss the development of resting membrane potential. (25)
  2. Describe the structure of gastric glands and discuss in details the control of parietal cell secretion. Add a note on peptic ulcer. (25)
  3. Write briefly on : (5 × 10 = 50)
    - (a) Sodium Potassium pump
    - (b) Plasmin
    - (c) Chylomicrons
    - (d) Mast cells
    - (e) Complement system.
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April-2003

[KI 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

Answer ALL questions.

Draw diagrams wherever necessary.

1. Discuss the physiological basis of the different types of Anemias. (25)
  2. What is the principle underlying measurement of body fluid compartments? Discuss the measurement and regulation of ECF volume. (25)
  3. Write briefly on : (5 × 10 = 50)
    - (a) GI hormones (Gastro Intestinal Hormones)
    - (b) Transport mechanisms across cell membranes
    - (c) Pathophysiology of Jaundice
    - (d) Calmodulin
    - (e) Filling and emptying of the gall bladder.
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3. Write short notes : (10 × 5 = 50)

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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

M.C.Q. must be answered **SEPARATELY** on the  
answer sheet provided as per the instructions on  
the first page.

Answer ALL questions.

1. Explain in detail the mechanisms of transport  
across the cell membrane. (15)

2. Discuss in detail the digestion, absorption and  
nutritional value of fats. (15)

- (a) Biological thermostat.
- (b) Methods of study of gastric function.
- (c) Mismatched blood transfusion.
- (d) Erythroblastosis foetalis.
- (e) Cellular Immunity.
- (f) Colloid osmotic pressure.
- (g) Bleeding disorders.
- (h) Peristalsis.
- (i) Plasmaproteins.
- (j) Homeostasis.

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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) Give a tabular column to show how prehepatic and posthepatic jaundice can be differentiated by examining urine and blood. Justify the differences. (15)

(2) Describe the regulation of gastric phase of gastric juice secretion. (15)

II. Write Short notes :

(10 × 5 = 50)

- (a) Ligand gated channels.
- (b) Achalasia cardia.
- (c) Explain effects of severe mismatched blood transfusions.
- (d) Draw a diagram to show the components and location of enteric nervous system.
- (e) Explain two different mechanisms by which oedema occurs.
- (f) Give a schematic diagram to show the steps in the formation of plasmin.
- (g) Explain why blood clotting is abnormal in patients with vitamin K deficiency. Compare.
- (h) Actions of secretin and cholecystokinin.
- (i) Simple and facilitated diffusion.
- (j) Composition of intracellular and extracellular fluids.