

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (PHYSIOLOGY) DEGREE EXAMINATION – JULY 2025**  
**PAPER I**

Wednesday, July 09, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer All questions.**

✍ **Draw diagrams wherever necessary.**

✍ **Major Essays:**

1. Discuss haemostasis and its significance.

(15 marks)

2. Discuss physiological basis of resting membrane potential and action potential in nerve and muscle cells.

(15 marks)

3. **Short Essays:**

3A. Discovery of Insulin

3B. Leucopoiesis

3C. Lymph formation, circulation and functions

3D. Active transport mechanisms in cell

3E. Apoptosis

3F. Evolution of circulatory system in terrestrial animals

3G. Physiological benefits of regular Yoga practice

3H. Contributions of Sir Charles Sherrington in neurophysiology

3I. Body adaptation to hostile environmental conditions

3J. Hazards of mismatched blood transfusion

(7 marks × 10 = 70 marks)



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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (PHYSIOLOGY) DEGREE EXAMINATION – JULY 2025**

**PAPER II**

Thursday, July 10, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

 **Answer ALL questions.**

 **Draw Diagrams wherever necessary**

 **Major Essays:**

1. Discuss how alveolar air composition is maintained constantly with supportive evidences.  
(15 marks)

2. Discuss how blood flow is regulated in cerebral and coronary circulatory systems.  
(15 marks)

3. **Short Essays:**

3A. Endocrine functions of kidney

3B. Role of pancreas in protein and fat digestion

3C. Counter current mechanisms in urine formation

3D. Sacral centers in control of visceral reflexes

3E. His Bundle electrogram

3F. Compliance of lungs and thorax

3G. Gastric function tests

3H. Heart blocks

3I. Carbon dioxide dissociation curves

3J. Regulation of salivary secretion

(7 marks × 10 = 70 marks)

